Grizzly Industrial, Inc.®

MODEL G0442/G0601
5 HP CYCLONE DUST COLLECTOR
OWNER'S MANUAL

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WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.
FOR MODELS MANUFACTURED SINCE 8/10 #TS12622 PRINTED IN TAIWAN

⚠ WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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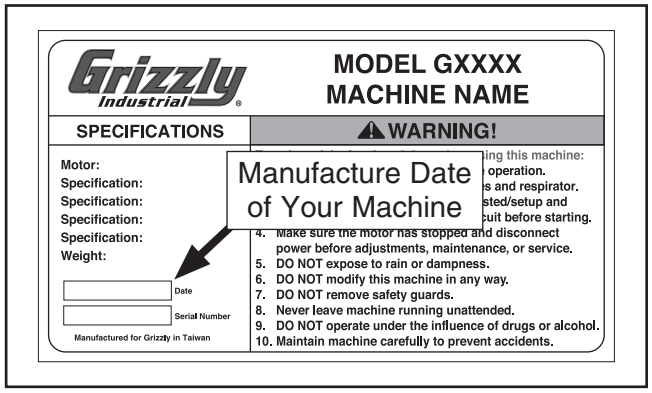
INTRODUCTION

Manual Accuracy

We are proud to offer this manual with your new machine! We've made every effort to be exact with the instructions, specifications, drawings, and photographs of the machine we used when writing this manual. However, sometimes we still make an occasional mistake.

Also, owing to our policy of continuous improvement, **your machine may not exactly match the manual**. If you find this to be the case, and the difference between the manual and machine leaves you in doubt, check our website for the latest manual update or call technical support for help.

Before calling, find the manufacture date of your machine by looking at the date stamped into the machine ID label (see below). This will help us determine if the manual version you received matches the manufacture date of your machine.



For your convenience, we post all available manuals and manual updates for free on our website at **www.grizzly.com**. Any updates to your model of machine will be reflected in these documents as soon as they are complete.

Contact Info

We stand behind our machines. If you have any service questions, parts requests or general questions about the machine, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
E-Mail: techsupport@grizzly.com

We want your feedback on this manual. If you can take the time, please email or write to us at the address below and tell us how we did:

Grizzly Industrial, Inc.
C/O Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

Machine Description

The Model G0442/G0601 is a 2-stage cyclone wood dust collector capable of collecting dust from multiple machines running simultaneously.

Cyclonic action separates the heavy dust and chips from the fine particles and drops them into the steel collection drum. Any remaining fine dust travels past the impeller and is trapped by the pleated cartridge filter made of spun-bond polyester. With the use of the cable and pulley system on the outside of the filter assembly, the caked dust is forced down into the collection bag.

The machine is controlled directly by the remote magnetic switch mounted to it or by the IR remote controller—each control includes timer options.

Identification

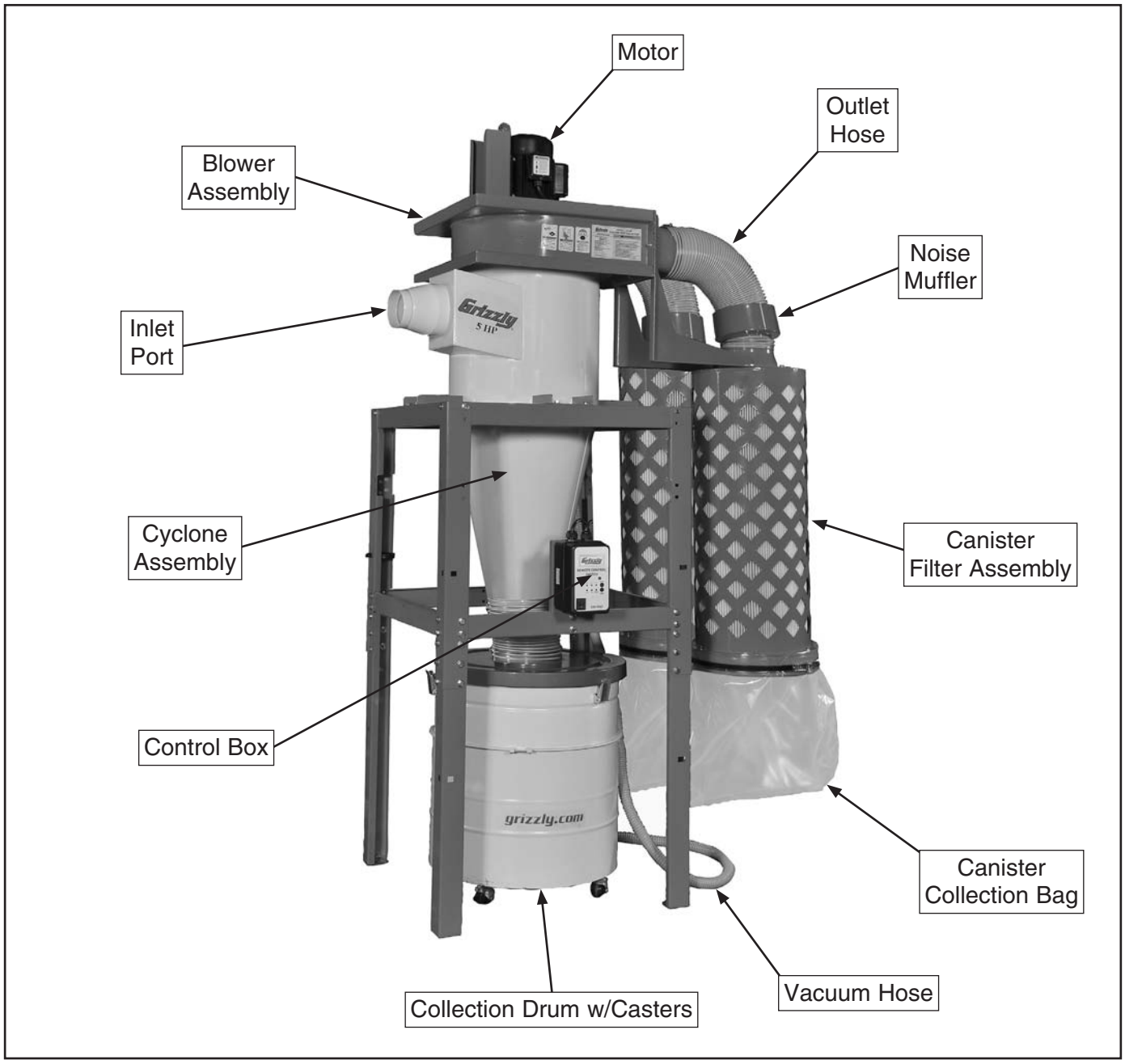
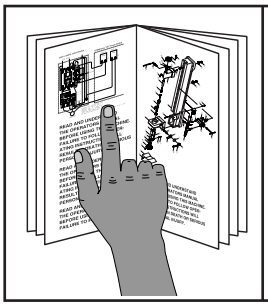


Figure 1. Identification (Model G0442 shown).



WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.

MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

MODEL G0442 5 HP CYCLONE DUST COLLECTOR

Product Dimensions:

Weight..... 517 lbs.
Length/Width/Height..... 56-7/8 x 63 x 111-1/2 in.
Foot Print (Length/Width)..... 63 x 56-7/8 in.

Shipping Dimensions:

Carton #1

Type..... Cardboard
Content..... Machine
Weight..... 469 lbs.
Length/Width/Height..... 61 x 30 x 37 in.

Carton #2

Type..... Cardboard
Content..... Stand
Weight..... 89 lbs.
Length/Width/Height..... 41 x 15 x 8 in.

Carton #3

Type..... Cardboard
Content..... Canister
Weight..... 55 lbs.
Length/Width/Height..... 48 x 23 x 23 in.

Carton #4

Type..... Cardboard
Content..... Canister
Weight..... 55 lbs.
Length/Width/Height..... 48 x 23 x 23 in.

Electrical:

Power Requirement..... 220V, Single-Phase, 60 Hz
Minimum Circuit Size..... 30 amp
Switch..... Magnetic with Thermal Overload Protection
Switch Voltage..... 220V
Plug Included..... No
Recommended Plug/Outlet Type..... L6-30

Motors:

Main

Type..... TEFC Class "F"
Horsepower..... 5 HP
Voltage..... 220V
Prewired..... 220V
Phase..... Single
Amps..... 22.4A
Speed..... 3450 RPM
Cycle..... 60 Hz
Number Of Speeds..... 1
Power Transfer ..... Direct Drive
Bearings..... Shielded and Permanently Lubricated

Main Specifications:

Operation

Air Suction Cap	2184 CFM @ 1.9 in. S.P.
Max Static Pressure	14.0 in.
Main Inlet Size	10 in.
Canister Filtration	0.2 - 2 micron

Bag Information

No Of Lower Bags	2

Canister Information

No Of Canister Filters	2
Canister Filter Diameter	20-1/8 in.
Filter Surface Area	31000 square in.
Collection Drum Size	55 gallons

Impeller Information

Impeller Type	Radial Fin
Impeller Size	16 in.

Construction

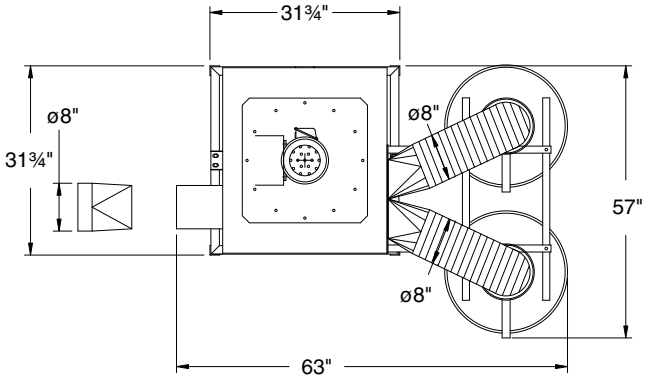
Lower Bag Material	Clear Plastic
Canister Material	Spun Bond Polyester
Base Construction	14 Gauge Steel
Frame Construction	14 Gauge Steel
Impeller Construction	Steel, Riveted
Blower Housing Construction	11 Gauge Steel
Body Construction	14 Gauge Steel
Collection Drum Construction	Steel

Other Specifications:

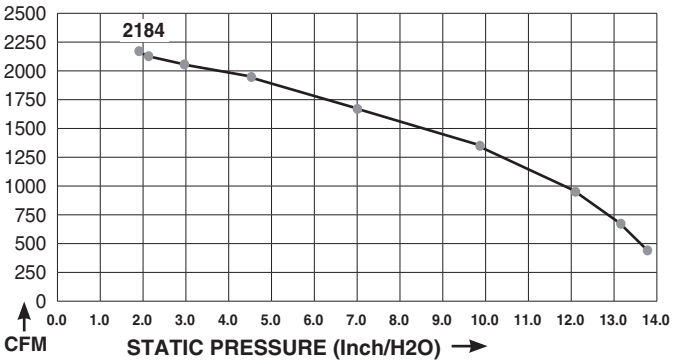
Country Of Origin	Taiwan
Warranty	1 Year
Serial Number Location	Grizzly Data Plate
Assembly Time	4 hours
Sound Rating	83 - 86 dB

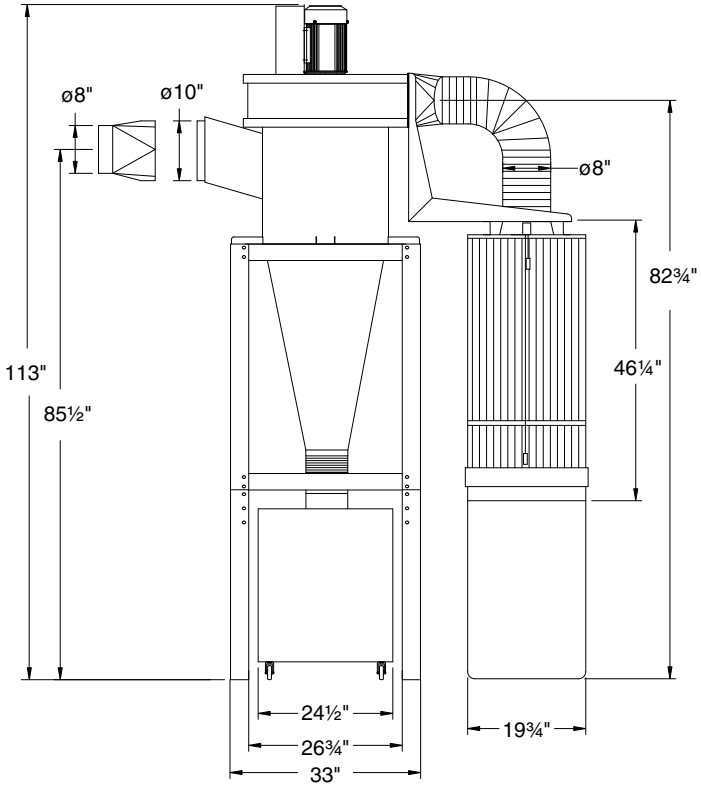
Features:

Reinforced Intake
Clear Disposable Plastic Collection Bags
Gentle Brush Cleaning Mechanism Inside Cartridge Filter
Remote Control with Programmable Timer
Casters Mounted on Collection Drum for Easy Moving
Blower and Barrel Rotate 360 degrees for Inlet and Outlet Positioning
BIA Certified Cartridge Filter
Reinforced Motor Mount
Wall Mountable Blower Design
Stand Included



Performance Curve





5 HP GRIZZLY DUST COLLECTOR PERFORMANCE RESULTS					
Max CFM	**Max SP**	**HP**	**Volts**	**Inlet**	**Impeller**
2184	14.0	5 HP	220V	10"	16"

Restrictor plate (inch)	Dia 10"	Dia 9"	Dia. 8"	Dia. 7"	Dia. 6"	Dia. 5"	Dia. 4"	Dia. 3"	Dia. 2"
Static pressure (Inch/H2O)	1.9	2.1	3.0	4.6	7.0	9.8	12.1	13.2	13.7
CFM	2184	2129	2072	1953	1692	1381	977	691	488

The airflow test probe is located 1.5x duct diameter upstream from the air inlet. Test pipe length is a minimum of 10x duct diameter.

MACHINE DATA SHEET

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MODEL G0601 5 HP 3-PHASE CYCLONE DUST COLLECTOR

Product Dimensions:

Weight..... 517 lbs.
Length/Width/Height.....63 x 56-7/8 x 111-1/2 in.
Foot Print (Length/Width)..... 63 x 56-7/8 in.

Shipping Dimensions:

Carton #1

Type..... Cardboard
Content.....Machine
Weight..... 444 lbs.
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Type..... Cardboard
Content..... Canister
Weight..... 55 lbs.
Length/Width/Height..... 48 x 23 x 23 in.

Carton #3

Type..... Cardboard
Content..... Canister
Weight..... 55 lbs.
Length/Width/Height..... 48 x 23 x 23 in.

Carton #4

Type..... Cardboard
Content..... Stand
Weight..... 89 lbs.
Length/Width/Height..... 41 x 15 x 7 in.

Electrical:

Power Requirement..... 220V or 440V, 3-phase, 60 Hz
Minimum Circuit Size.....15A at 220V; 15A at 440V
Switch.....Magnetic with Thermal Overload Protection
Switch Voltage.....220V (440V Optional)
Recommended Plug/Outlet Type..... 15-15 at 220V; Hardwire w/Switch at 440V
Voltage Conversion Kit..... G440V0601
Phase Converter.....Rotary Only (Not Approved for Static)

Motors:

Main

Type..... Class "F"
Horsepower.....5 HP
Voltage..... 220V/440V
Prewired.....220V
Phase.....3-Phase
Amps.....11.2A at 220V; 5.6 A
Speed.....3450 RPM
Cycle.....60 Hz
Number Of Speeds..... 1
Power Transfer .....Direct Drive
Bearings.....Shielded and Permanently Lubricated

Main Specifications:

Operation

Air Suction Cap	2184 CFM @1.9 in. S.P.
Max Static Pressure	14.0 in.
Main Inlet Size	10 in.
Canister Filtration	0.2 - 2 micron

Bag Information

No Of Lower Bags	2

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Canister Filter Diameter	20-1/8 in.
Filter Surface Area	31000 square in.
Collection Drum Size	55 gallons

Impeller Information

Impeller Type	Radial Fin
Impeller Size	16 in.

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Lower Bag Material	Clear Plastic
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Base Construction	14 Gauge Steel
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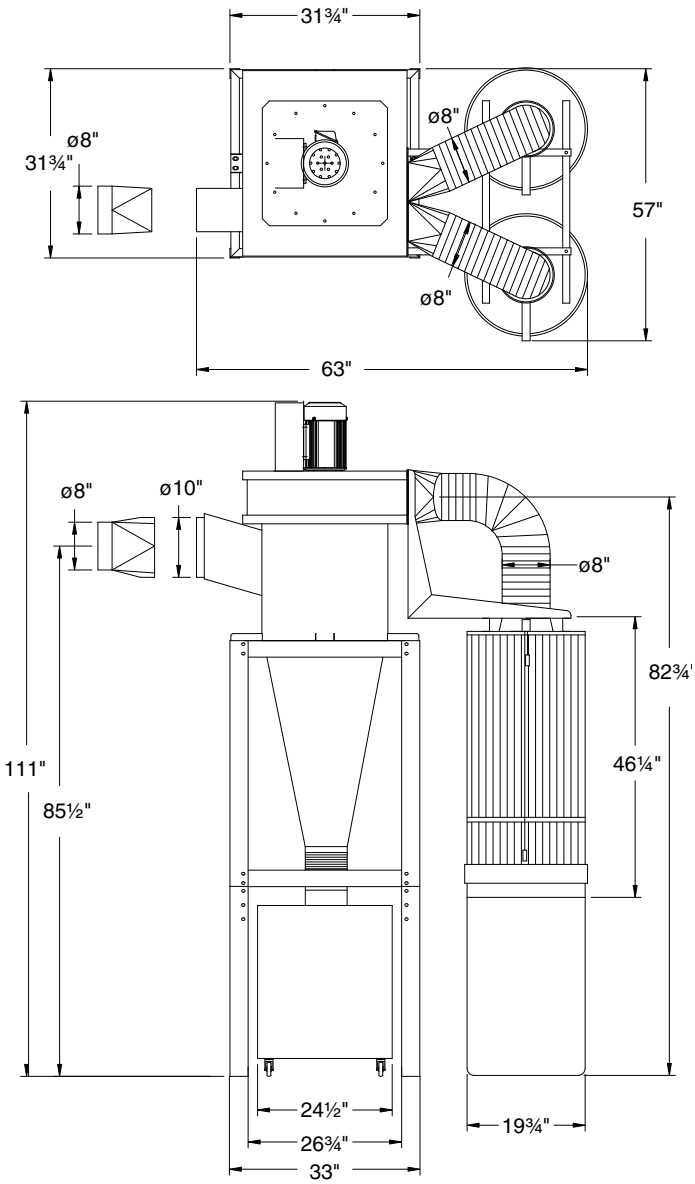
Other Specifications:

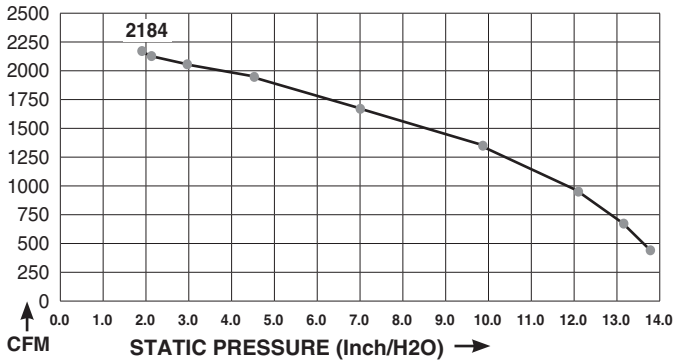
Country Of Origin	Taiwan
Warranty	1 Year
Serial Number Location	ID Label
Assembly Time	3 hours
Sound Rating	83 - 86 dB

Features:

Reinforced Intake
Clear Disposable Plastic Collection Bags
Gentle Brush Cleaning Mechanism Inside Cartridge Filter
Casters Mounted on Collection Drum for Easy Moving
Blower and Barrel Rotate 360 deg. For Inlet and Outlet Positioning
BIA Certified Filter
Reinforced Motor Mount
Wall Mountable Blower Design
Rugged Steel Stand Included



Performance Curve



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Max CFM	**Max SP**	**HP**	**Volts**	**Inlet**	**Impeller**
2184	14.0	5 HP	220V	10"	16"

Restrictor plate (inch)	Dia 10"	Dia 9"	Dia. 8"	Dia. 7"	Dia. 6"	Dia. 5"	Dia. 4"	Dia. 3"	Dia. 2"
Static pressure (Inch/H2O)	1.9	2.1	3.0	4.6	7.0	9.8	12.1	13.2	13.7
CFM	2184	2129	2072	1953	1692	1381	977	691	488

The airflow test probe is located 1.5x duct diameter upstream from the air inlet. Test pipe length is a minimum of 10x duct diameter.

SECTION 1: SAFETY

⚠WARNING
For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.

⚠DANGER **Indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.**

⚠WARNING **Indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.**

⚠CAUTION **Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury. It may also be used to alert against unsafe practices.**

NOTICE **This symbol is used to alert the user to useful information about proper operation of the machine.**

⚠WARNING
Safety Instructions for Machinery

OWNER'S MANUAL. Read and understand this owner's manual BEFORE using machine. Untrained users can be seriously hurt.

EYE PROTECTION. Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.

HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material, and always wear a NIOSH-approved respirator to reduce your risk.

WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

HEARING PROTECTION. Always wear hearing protection when operating or observiing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

MENTAL ALERTNESS. Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

⚠WARNING

DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.

APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!

DANGEROUS ENVIRONMENTS. Do not use machinery in wet or rainy locations, cluttered areas, around flammables, or in poorly-lit areas. Keep work area clean, dry, and well-lighted to minimize risk of injury.

ONLY USE AS INTENDED. Only use machine for its intended purpose. Never modify or alter machine for a purpose not intended by the manufacturer or serious injury may result!

USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

CHILDREN & BYSTANDERS. Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.

REMOVE ADJUSTING TOOLS. Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!

SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.

FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.

FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.

GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

NEVER STAND ON MACHINE. Serious injury or accidental contact with cutting tool may occur if machine is tipped. Machine may be damaged.

STABLE MACHINE. Unexpected movement during operations greatly increases the risk of injury and loss of control. Verify machines are stable/secure and mobile bases (if used) are locked before starting.

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

UNATTENDED OPERATION. Never leave machine running while unattended. Turn machine ***OFF*** and ensure all moving parts completely stop before walking away.

MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. An improperly maintained machine may increase the risk of serious injury.

CHECK DAMAGED PARTS. Regularly inspect machine for damaged parts, loose bolts, mis-adjusted or mis-aligned parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged or mis-adjusted parts before operating machine.

EXPERIENCING DIFFICULTIES. If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support Department at (570) 546-9663.

⚠WARNING
Additional Safety Instructions for Dust Collectors

MACHINE USE. This machine is intended to only collect wood dust and chips from woodworking machines. Do not use this dust collector as a vacuum or with machines producing dust/chips from metal, asbestos products, lead paint, silica or any products that are not natural wood or man-made wood products, such as plywood or particle boards.

WEAR RESPIRATOR. This machine may blow fine dust particles into the air during operation causing a hazard to the lungs. Always wear an approved respirator during machine operation and for a short time after.

SUSPENDED DUST PARTICLES AND IGNITION SOURCES. Do not operate the dust collector in area were explosion risks are high. Areas of high risk include, but are not limited to, areas near pilot lights or open flames.

EMPTYING DUST. When emptying dust from the collection bags or drum, wear a respirator and safety glasses. Empty dust away from ignition sources and into an approved container, then dispose of properly.

SAFE SERVICING. Disconnect the machine from power and allow the impeller to come to a complete stop before servicing, maintenance, adjustments.

AVOIDING FIRES. Do not allow steel particles to strike the impeller—this may produce a spark. Sparks can smolder in the wood dust for a long time before the fire or flame is detected. If you accidentally collect metal during operation, immediately turn off the dust collector, disconnect it from power, and wait for all moving parts to stop. Remove the collection bags and empty the dust into an approved air tight metal container. Prevent any chance of accidentally collecting metal again before resuming operations.

KEEPING FINGERS SAFE. Do not place your hands or tools near the open inlet during operation for any reason. The powerful suction could easily cause accidental contact with the impeller which will cause serious personal injury or damage to the machine.

DUST HAZARD. Be aware that certain woods may cause an allergic reaction in people and animals, especially when exposed to fine dust. Make sure you know what type of wood dust you will be exposed to in case there is a possibility of an allergic reaction.

⚠WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

⚠CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.

SECTION 2: POWER SUPPLY

Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by a qualified electrician in accordance with all applicable codes and standards.

⚠WARNING

Electrocution, fire, or equipment damage may occur if machine is not correctly grounded and connected to the power supply.

Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

G0442 Full-Load Current Rating....22.4 Amps

G0601:

Full-Load Current Rating at 220V..... 11.2 Amps
Full-Load Current Rating at 440V.....5.6 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements in the following section.

Circuit Requirements

A power supply circuit includes all electrical equipment between the main breaker box or fuse panel in your building and the incoming power connections at the machine. This circuit must be sized to safely handle the full-load current drawn from the machine for an extended period of time.

⚠CAUTION

For your own safety and protection of property, consult a qualified electrician if you are unsure about wiring practices or electrical codes in your area.

Note: *The circuit requirements listed in this manual apply to a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure that the circuit is properly sized for safe operation.*

G0442 Circuit Requirements for 220V

The Model G0442 is prewired to operate on a 220V power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage 220V/240V
Cycle.....60 Hz
Phase..... Single-Phase
Circuit Rating.....30 Amps
Plug/Receptacle .....NEMA L6-30

G0601 Circuit Requirements for 220V

The Model G0601 is prewired to operate on a 220V power supply circuit that has a verified ground and meets the following requirements:

Nominal Voltage 220V/240V
Cycle ..... 60 Hz
Phase 3-Phase
Circuit Rating ..... 15 Amps
Plug/Receptacle ..... NEMA 15-15

G0601 Circuit Requirements for 440V

The Model G0601 can be converted to operate on a 440V power supply. **G0601 440V Conversion** instructions are provided later in this manual. The intended 440 circuit must have a verified ground and meet the requirements that follow:

Nominal Voltage 440V/480V
Cycle ..... 60 Hz
Phase 3-Phase
Rated Size ..... 15 Amps
Connection ..... Hardwire with Locking Switch

Grounding Instructions

In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current—in order to reduce the risk of electric shock.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Grounding & Plug Requirements

For Model G0442 220V operation: The recommended plug specified for the Model G0442 under **Circuit Requirements** has a grounding prong that must be connected to the equipment-grounding wire of the power cord. The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances (see **Figure 2**).

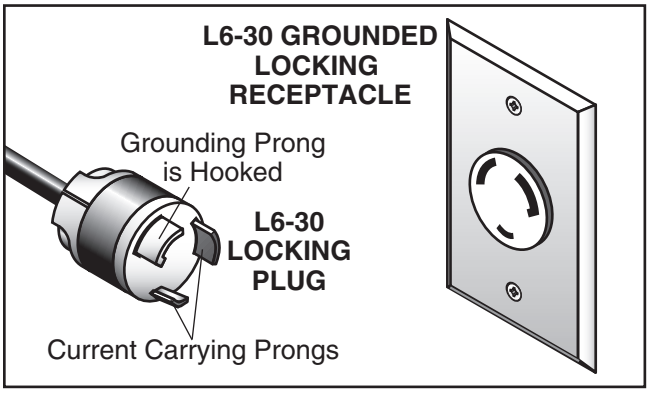


Figure 2. Typical L6-30 plug and receptacle.

WARNING

Serious injury could occur if you connect the machine to power before completing the setup process. DO NOT connect to power until instructed later in this manual.

NOTICE

No adapter is available or should be used with this machine. If the machine must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the machine must comply with all local codes and ordinances.

For Model G0601 220V operation: The recommended plug specified for the Model G0601 under **Circuit Requirements** has a grounding prong that must be connected to the equipment-grounding wire of the power cord. The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances (see **Figure 3**).

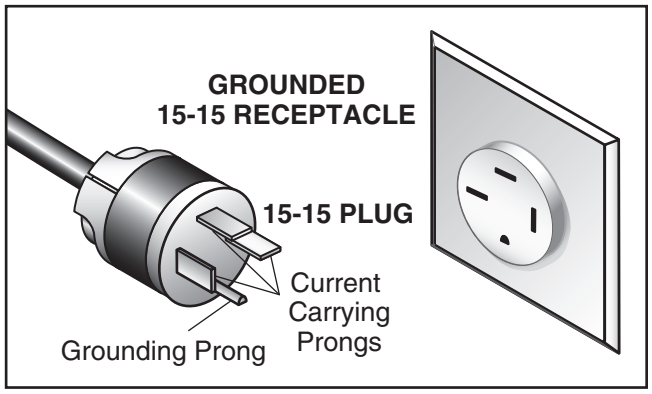


Figure 3. Typical 15-15 plug and receptacle.

For Model G0601 440V operation: As specified in **Circuit Requirements**, the Model G0601 must be hardwired to the power source for 440V operation, and the power source must use a locking switch as a means of disconnection (see **Figure 4**). The machine must also be connected to a grounded metal permanent wiring system or to a system having an equipment-grounding conductor. Due to the complexity and high voltage involved, this type of installation MUST be done by a qualified electrician.

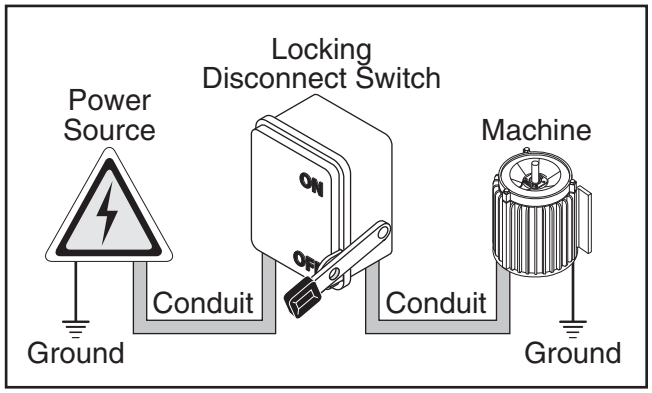


Figure 4. Typical hardwire setup with a locking disconnect switch.

Extension Cords (220V Only)

We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

Maximum Length (Shorter is Better).....50 ft.

G0442 Minimum Gauge Size.....10 AWG

G0601 Minimum Gauge Size.....12 AWG

G0601 440V Conversion

The Model G0601 can be converted for 440V operation. This conversion job consists of disconnecting the machine from the power source, replacing the control box assembly, and rewiring the motor for 440V operation.

The necessary control box (Part P0601003-1) for this procedure can be purchased by calling Grizzly Customer Service at (800) 523-4777.

All wiring changes must be inspected by a qualified electrician before the machine is connected to the power source. If you need help at any time during this procedure, call Grizzly Tech Support at (570) 546-9663.

To rewire the Model G0601 for 440V operation:

1. DISCONNECT MACHINE FROM POWER!

2. Record the wire colors and connections of the four incoming power wires and the four outgoing motor wires inside the 220V control box, as illustrated in **Figure 5**. You can also refer to the **G0601 Wiring Diagram** on **Page 53** for a more complete wiring illustration.

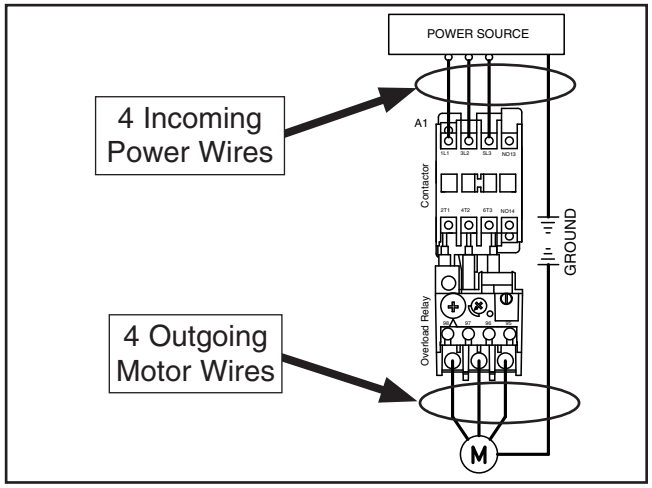


Figure 5. Incoming and outgoing wire connections to the control box.

3. Disconnect these eight wires, then replace the 220V control box with the 440V control box.

4. Reconnect the wires as recorded in **Step 2**.

5. Rewire the motor as shown inside the motor junction cover.

   Note: *The reference wiring diagram on **Page 53** was current at the time of printing, but always use the wiring diagram provided inside the motor junction box, as it will reflect any changes to the motor shipped with the machine.*

Correcting Phase Polarity (G0601 Only)

This subsection is only provided for troubleshooting. If you discover during the test run that the machine will not operate, or that the impeller spins backward, the power connections may be wired out-of-phase. Without the proper test equipment to determine the polarity of the power source legs, wiring machinery to 3-phase power may require trial-and-error. Correcting phase polarity is simply a matter of reversing the positions where two of the incoming power source wires are connected inside the control box.

NOTICE

If this machine is wired out-of-phase, the motor and impeller will spin in the wrong direction. The efficiency of the dust collector will be greatly reduced and will not provide the rated CFM. You must make sure the motor is spinning in the correct direction before placing the machine into full operation. Perform *Step 10* of the test run on *Page 32* to make sure the machine is correctly wired.

To correct phase polarity:

1. DISCONNECT MACHINE FROM POWER!

2. Open the control box and swap the connections of any two incoming hot wires from the power source (see **Figure 6**).

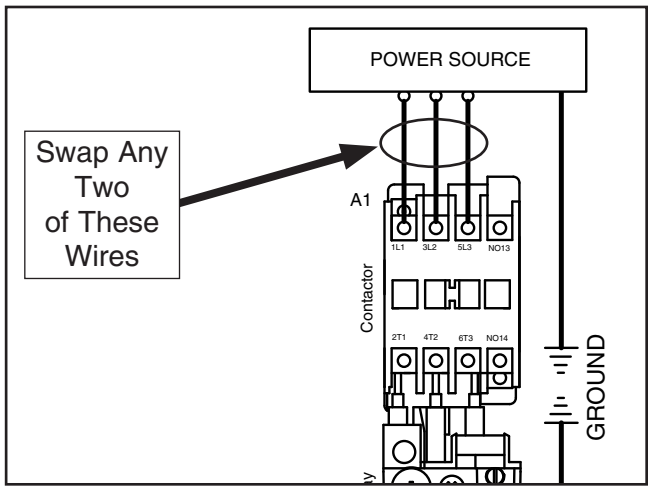


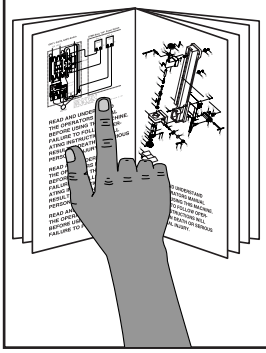
Figure 6. Wire connections to swap to correct phase polarity.

3. Secure the control box cover, then re-connect the machine to power.

4. Perform **Step 10** of the test run on **Page 32** to confirm that the power connections are correct.

   —If the motor and impeller are still rotating in the wrong direction, contact our Tech Support at (570) 546-9663 for assistance.

SECTION 3: SETUP



⚠WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

⚠WARNING

Wear safety glasses during the entire setup process!

⚠WARNING

This machine and its components are very heavy. Get lifting help or use power lifting equipment such as a forklift to move heavy items.

Needed for Setup

The following are needed to complete the setup process, but are not included with the machine.

Description	Qty
• Safety Glasses	1
• Forklift	1
• Additional People	1
• Wrench/Socket ½"	2
• Wrench/Socket 9/16"	2
• Square	1

Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it. If you discover the machine is damaged, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.

⚠WARNING

SUFFOCATION HAZARD!

Keep children and pets away from plastic bags or packing materials unpacked with this machine. Discard immediately.

Inventory

The following is a description of the main components shipped with the machine. Lay the components out to inventory them.

Collector Box Contents (Figure 7): **Qty**

A. Intake Cylinder 1
B. Cyclone Funnel 1
C. Intake Barrel 1
D. Collection Bags
— Canister Filter 2
— Collection Drum 1
E. Gray Flexible Hoses 8" x 25" 2
F. Motor/Blower Housing Assembly 1
G. Upper Collection Drum & Clamp Assy 1
H. Noise Mufflers 2
I. Gray Flexible Hoses 8" x 5" 2
J. Lower Collection Drum 1
K. Clear Flexible Hose 9" x 10" 1
L. Hose Clamps 9" 2
M. Collection Drum Lid 1
N. Filter Cross Braces 2
O. Outlet Port 1
P. Filter L-Braces 2
Q. Foam Tape 3 x 6 x 1800mm 2
R. Hose Clamps 8" 8
S. Reducer 1
T. Hardware Box
—Phillips Head Screws #10-24 x 3/8" 12
—Hex Nuts #10-24 12
—Drum Latches 3
—Foam Tape 3 x 15 x 700mm 8
U. Hardware Box
—Hex Bolts 5/16"-18 x 1" 22
—Hex Bolts 5/16"-18 x 3/4" 28
—Hex Bolts 3/8"-16 x 3/4" 6
—Flat Washers 3/8" 12
—Flat Washers 5/16" 64
—Fender Washers 5/16" 8
—Hex Nuts 5/16"-18 22
—Hex Nuts 3/8"-16 6
—Sheet Metal Screws M4 x 12 3
V. Hardware Box
—Casters 4
—Hex Nuts 3/8"-16 4
—Lock Washers 3/8" 4
—Flat Washers 3/8" 8
W. Barrel Gaskets 2
X. Outlet Gasket 1
Y. Brace Gaskets 4
Z. Drum Lid PVC Rubber Seal 2M 1
AA. Remote Control (not shown) 1
AB. Vacuum Hose Clamps 1¼" 2
AC. Vacuum Hose Clips 2
AD. Vacuum Hose 1¼" x 98" 1
AE. Collection Drum Vacuum Ring 1
AF. Cyclone Vacuum Port 1

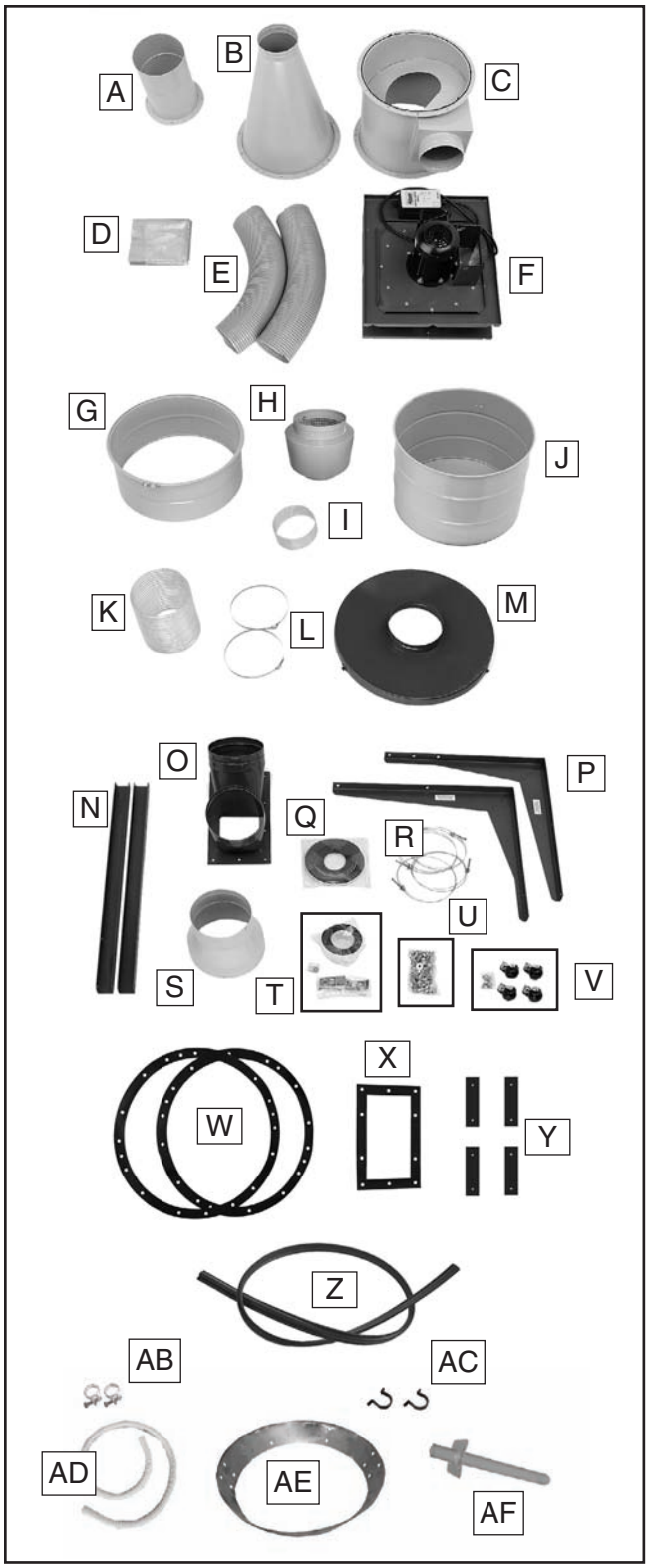


Figure 7. Contents of collector box.

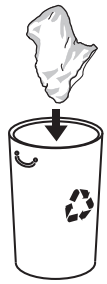
Stand Box Contents (Figure 8): **Qty**

A. Lower Stand Legs 4
B. Upper Stand Legs 4
C. Upper Stand Braces 4
D. Lower Stand Braces 4
E. Collector Mounting Brackets 4
F. Hardware Bags
—Hex Bolts 3/8"-16 x 3/4" 64
—Lock Nuts 3/8"-16 64
—Flat Washers 3/8" 128
—Hex Bolts 5/16"-18 x 1" 8
—Lock Nuts 5/16"-18 8
—Flat Washers 5/16" 16

Contents of Filter Boxes (Figure 9): **Qty**

G. Canister Filter Assemblies 2

If any nonproprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.



⚠WARNING

SUFFOCATION HAZARD!

Immediately discard all plastic bags and packing materials to eliminate choking/suffocation hazards for children and animals.

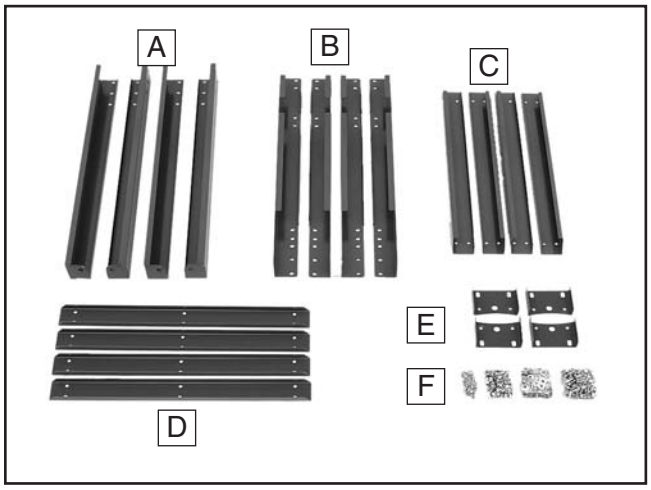


Figure 8. Contents of stand box.

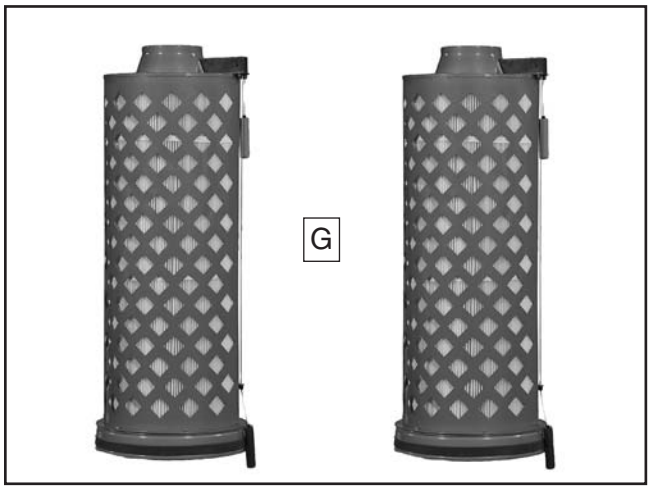
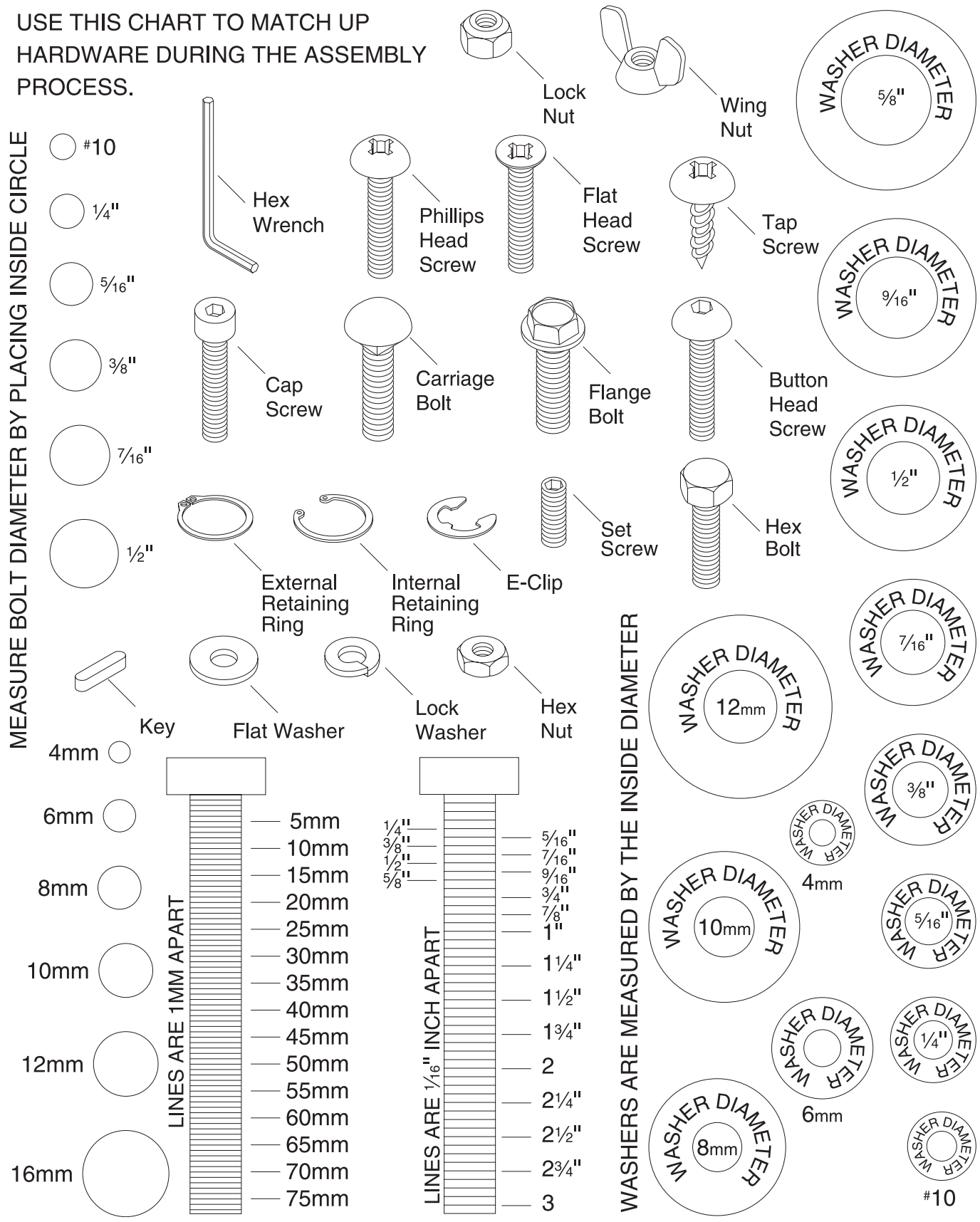


Figure 9. Contents of filter boxes.

Hardware Recognition Chart



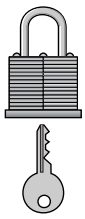
Site Considerations

Weight Load

Refer to the **Machine Data Sheet** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**



⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

Physical Environment

The physical environment where your machine is operated is important for safe operation and the longevity of its components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

Mounting to Shop Floor

Although not required, we recommend that you mount this machine to the floor. Because this is an optional step and floor materials may vary, floor mounting hardware is not included. Generally, you can either bolt the machine to the floor or mount it on machine mounts. Both options are described below. Whichever option you choose, it is necessary to level the machine with a precision level.

Bolting to Concrete Floors

Lag shield anchors with lag bolts and anchor studs (**Figure 10**) are two popular methods for anchoring an object to a concrete floor. We suggest you research the many options and methods for mounting the machine and choose the best that fits your specific application.

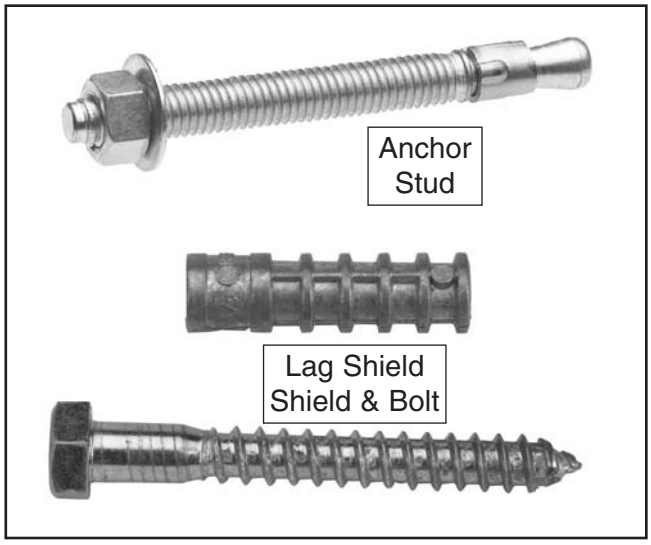


Figure 10. Typical fasteners for mounting to concrete floors.

NOTICE

Anchor studs are stronger and more permanent alternatives to lag shield anchors; however, they will stick out of the floor, which may cause a tripping hazard if you decide to move the machine.

Using Machine Mounts

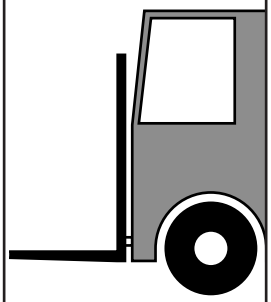
Using machine mounts, shown in **Figure 11**, gives the advantage of fast leveling and vibration reduction. The large size of the foot pads distributes the weight of the machine to reduce strain on the floor.

Figure 11. Machine mount example.

NOTICE

We strongly recommend securing the machine to the floor if it is hardwired to the power source. Consult with your electrician to ensure compliance with local codes.

Assembly



⚠WARNING

The Model G0442/G0601 is a heavy machine. Serious personal injury may occur if safe moving methods are not used. To be safe, get assistance and use power equipment to move the shipping crate and remove the machine from the crate.

To assemble the dust collector:

1. Connect the upper stand legs with the lower stand braces, using (16) ⅜"-16 x ¾" hex bolts, (32) ⅜" flat washers, and (16) ⅜"-16 lock nuts (see **Figure 12**).

   Note: *Do not fully tighten the fasteners for now.*

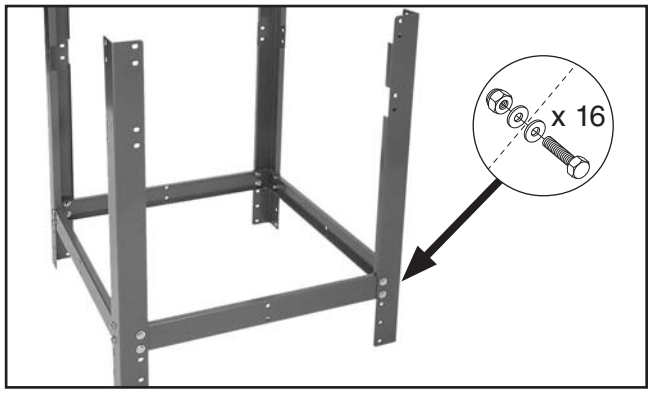


Figure 12. Initial assembly of upper stand legs connected to lower stand braces.

2. Attach the upper stand braces to the top of the assembly from **Step 1**, using (16) ⅜"-16 x ¾" hex bolts, (32) ⅜" flat washers, and (16) ⅜"-16 lock nuts, as shown in **Figure 13**.

   Note: *Do not fully tighten the fasteners for now.*

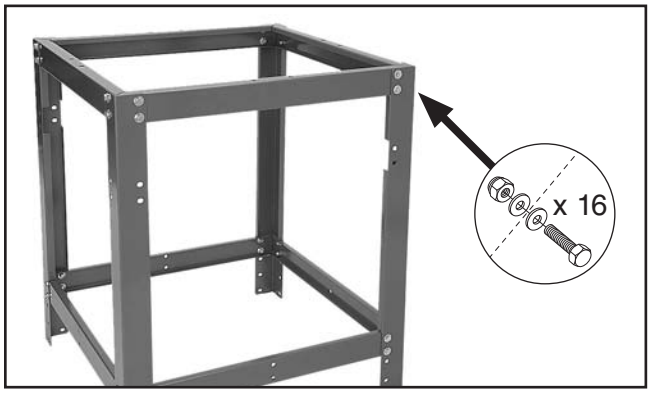


Figure 13. Upper braces attached to stand assembly.

3. Square up the stand, as shown in **Figure 14**, then tighten all the bolts.

Figure 14. Squaring stand assembly before tightening stand hardware.

4. Attach the cyclone funnel to the intake barrel with a barrel gasket between them, as shown in **Figure 15**, with (12) 5/16"-18 x 1" hex bolts, (24) 5/16" flat washers, and (12) 5/16"-18 hex nuts.

   Note: *At the places where you see three holes close together as shown in **Figure 16**, only use the center hole for this step. The two outside holes will be used in the next step.*

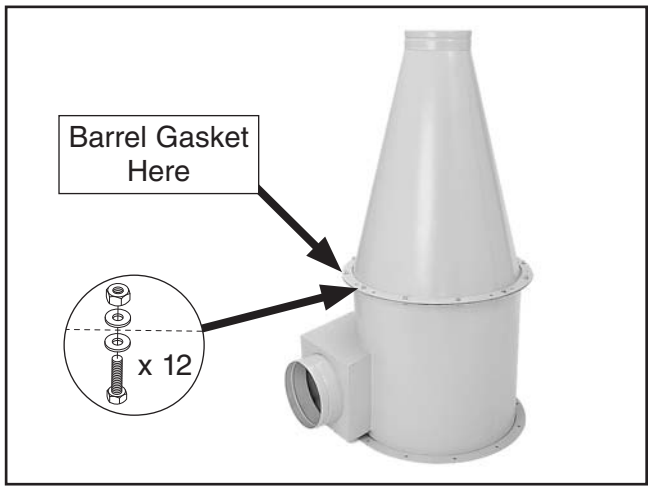


Figure 15. Cyclone funnel attached to intake barrel.

5. Attach the collector mounting brackets to the intake assembly, as shown in **Figure 16**, using (8) 5/16"-18 x 1" hex bolts, (16) 5/16" flat washers, and (8) 5/16"-18 lock nuts.

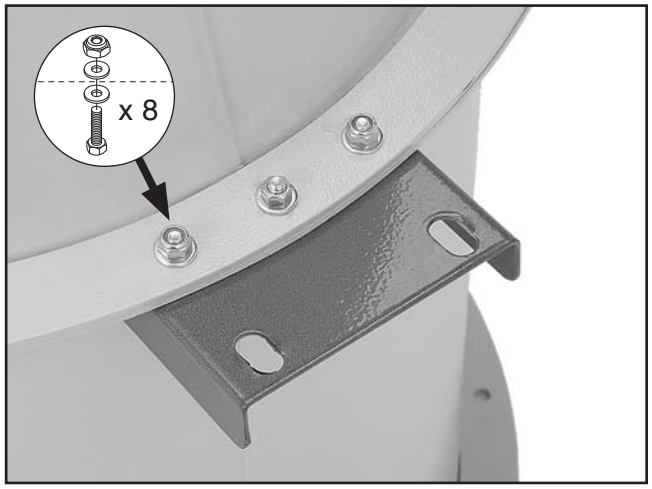


Figure 16. Collector mounting brackets attached to intake assembly (collector shown upside down in this photo).

6. Place a large piece of cardboard on the ground to prevent scraping the parts on the bare floor during the next steps.

7. With the help of another person, lay the stand assembly on its side on the cardboard and slide the collector assembly into the stand assembly, as shown in **Figure 17**.

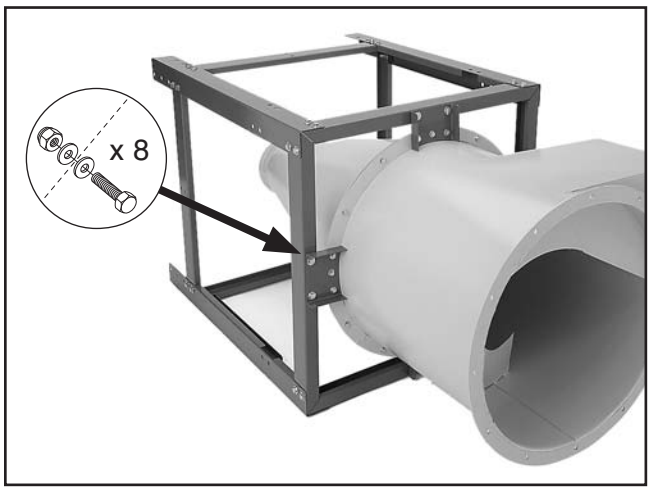


Figure 17. Collector assembly fastened to the stand.

8. Fasten the collector assembly to the stand with (8) 3/8"-16 x 3/4" hex bolts, (16) 3/8" flat washers, and (8) 3/8"-16 lock nuts, as shown in **Figure 17**.

9. Attach the 3 x 6mm foam tape on the intake cylinder, as shown in **Figure 18**.

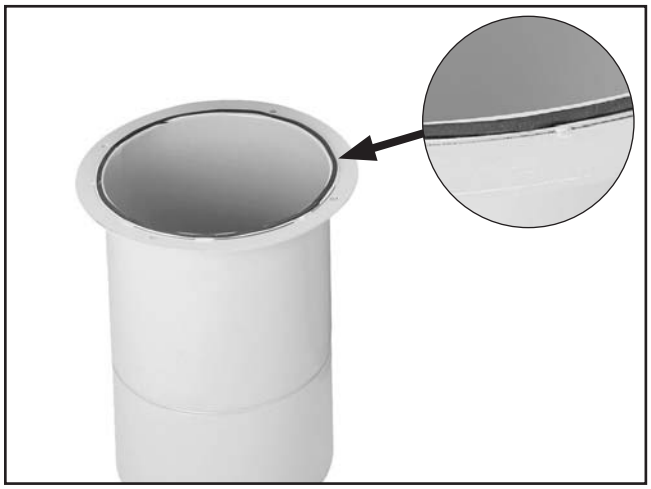


Figure 18. Foam tape attached to the intake cylinder.

10. Lift the assembly upright and rotate it so the inlet/outlet directions are suitable for your shop.

11. Lift the motor/blower housing assembly with a forklift and attach the intake cylinder to the bottom of the housing, as shown **Figure 19**, using (4) 5/16"-18 x 3/4" hex bolts and (4) 5/16" flat washers.

Note: *Because this part of the dust collector is not accessible after the assembly is complete, consider using Medium Strength Blue Thread Locker (Grizzly Model T21854) on the bolts that secure the intake cylinder to the motor/blower housing assembly to ensure that the fasteners won't come loose with vibration.*

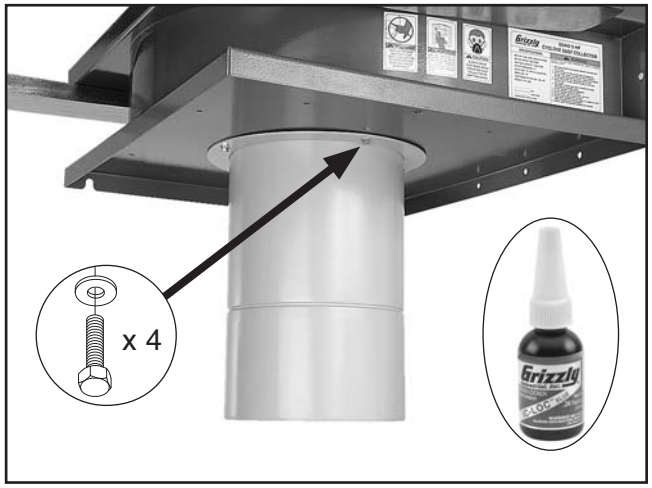


Figure 19. Intake cylinder attached to the bottom of motor/blower housing.

12. Place the remaining barrel gasket on top of the intake barrel, then carefully lower the motor/blower housing assembly on top of it approximately 1" away from the intake barrel.

13. Using two punches or Phillips screwdrivers, align the mounting holes, as shown in **Figure 20**, and lower the assembly onto the intake barrel.

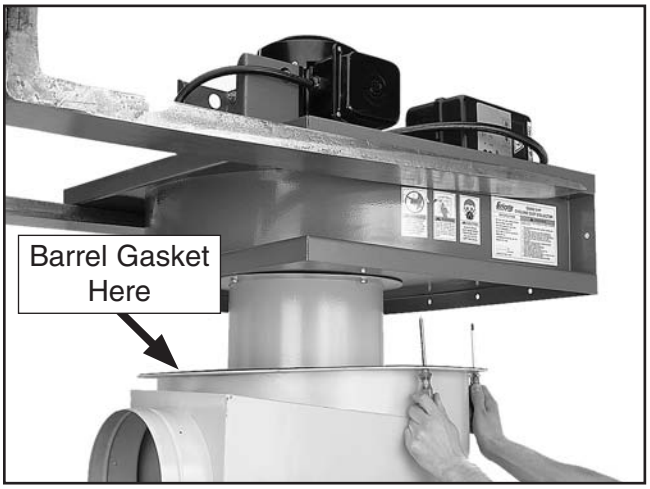


Figure 20. Aligning the mounting holes.

Note: *In the next step, when installing the two bolts above the intake port, use duct tape on the bottom of your wrench to hold the bolts in place, as shown in* ***Figure 21****. This will enable you to start the bolts easier.*

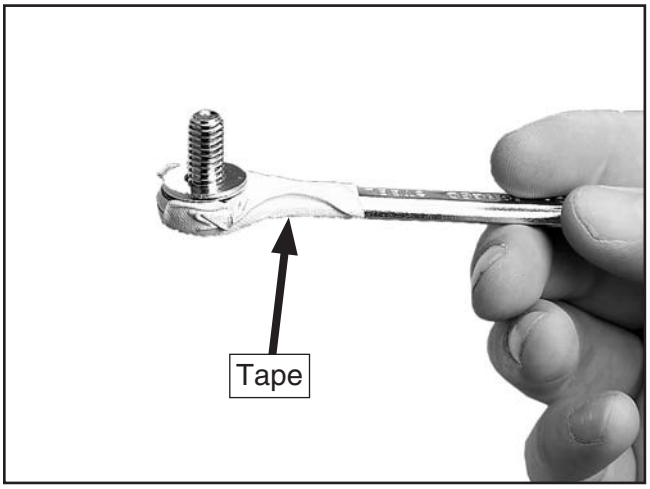


Figure 21. Using tape on wrench in tight spot.

14. Attach the assembly to the intake barrel, as shown in **Figure 22**, with (12) 5/16"-18 x 3/4" hex bolts and (12) 5/16" flat washers.

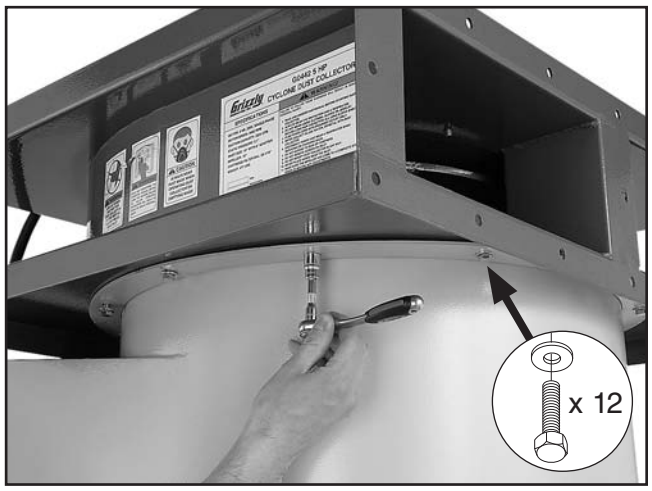


Figure 22. Securing blower on intake barrel.

15. Place the outlet gasket between the motor/blower housing and outlet port, then attach the outlet port and filter L-braces to the housing, as shown in **Figure 23**, using (10) 5/16"-18 x 1" hex bolts, (20) 5/16" flat washers, and (10) 5/16"-18 hex nuts.

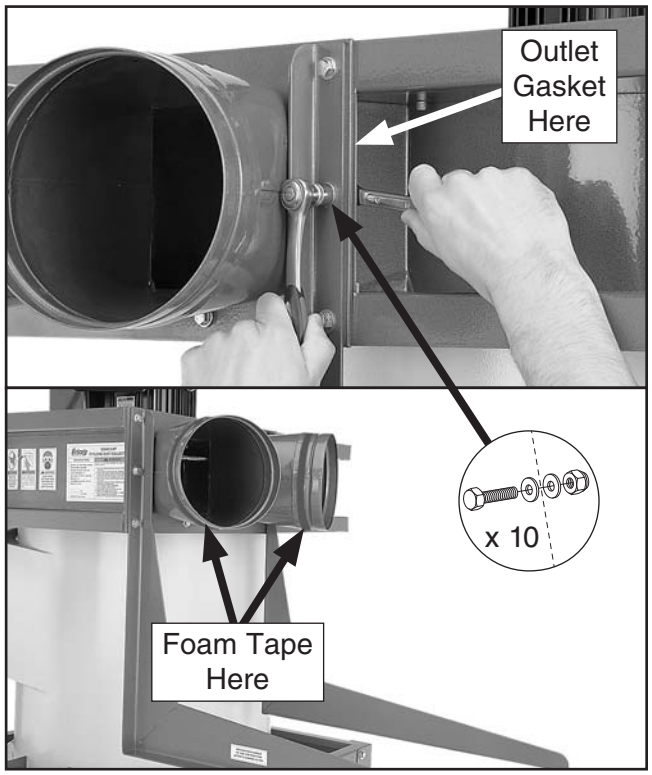


Figure 23. Attaching the outlet ports and filter L-braces to the blower housing.

16. Attach one roll of 3 x 15 x 700mm foam tape to the outside lip of each outlet port, as shown in **Figure 23**.

17. Attach the two filter cross braces to the L-braces, as shown in **Figure 24**, using (4) 3/8"-16 x 3/4" hex bolts, (8) 3/8" flat washers, and (4) 3/8"-16 hex nuts.

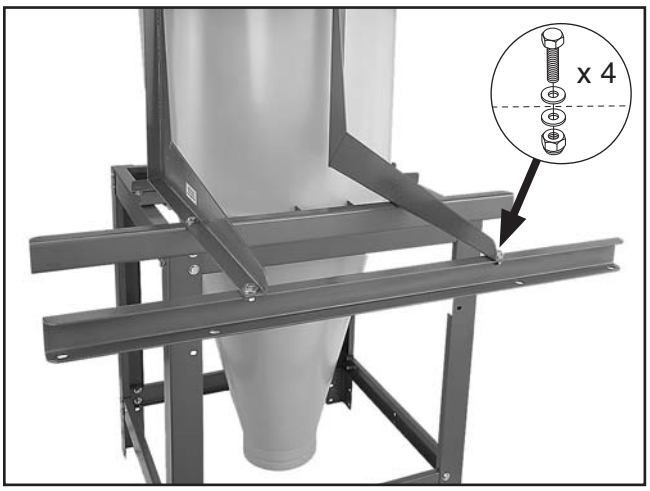


Figure 24. Attaching filter cross braces to L-braces.

18. Apply the 3 x 6 x 300mm foam tape to the mating surface of the cyclone vacuum port, then attach it to the cyclone funnel with (4) 5/16"-18 x 3/4" hex bolts and (4) 5/16" flat washers (see **Figure 25**).

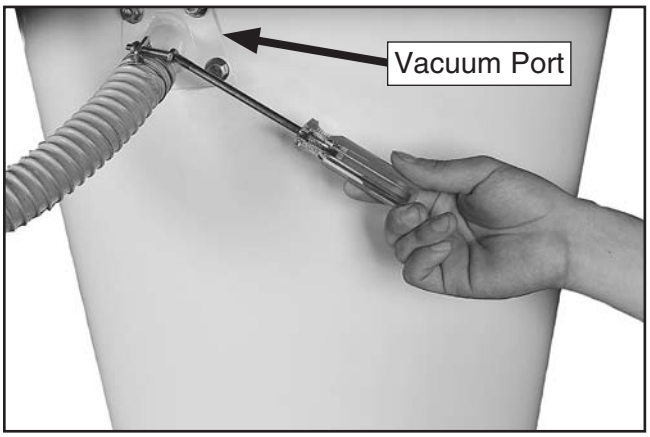


Figure 25. Cyclone vacuum tube and hose attachment.

19. Using the forklift, lift the entire assembly approximately 2" off the ground to gain clearance for filter installation.

20. Mount the two filters to the braces with brace gaskets between them, as shown in **Figure 26**, using (8) 5/16"-18 x 3/4" hex bolts and (8) 5/16" fender washers.

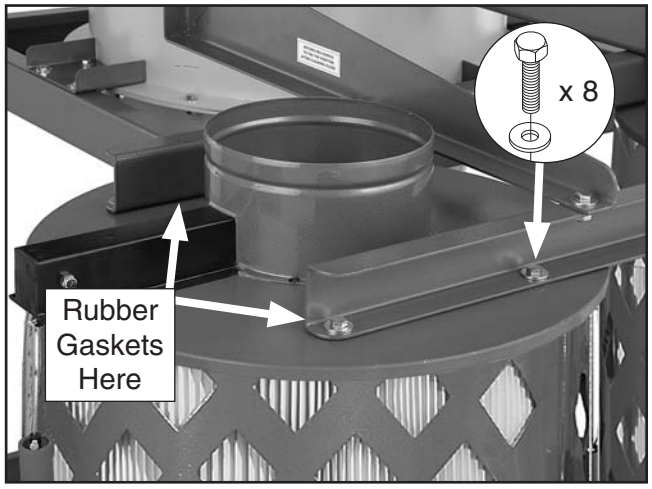


Figure 26. Canister filters mounted to the long support braces.

21. Attach one roll of 3 x 15 x 700mm foam tape to both ends of each noise muffler, then connect them between the outlet ports and the canisters with the 8" flexible hoses and clamps, as shown in **Figure 27**.

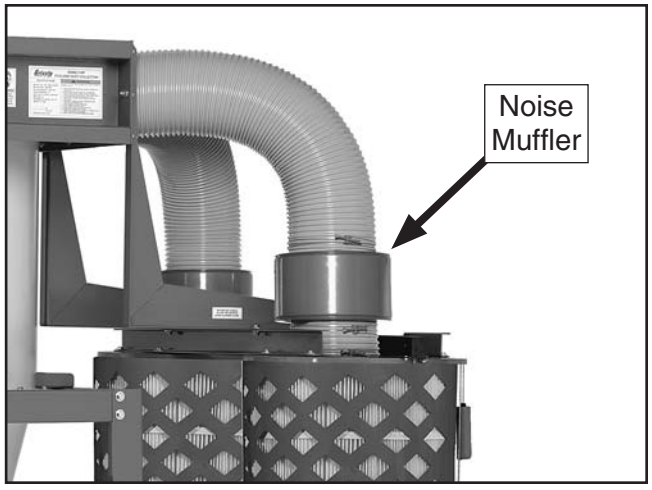


Figure 27. Noise mufflers connected between the outlet ports and the canisters.

22. Using the forklift, raise the assembly up and attach the lower stand legs to the upper stand legs, as shown in **Figure 28**, using (24) 3/8"-16 x 3/4" hex bolts, (48) 3/8" flat washers, and (24) 3/8"-16 lock nuts.

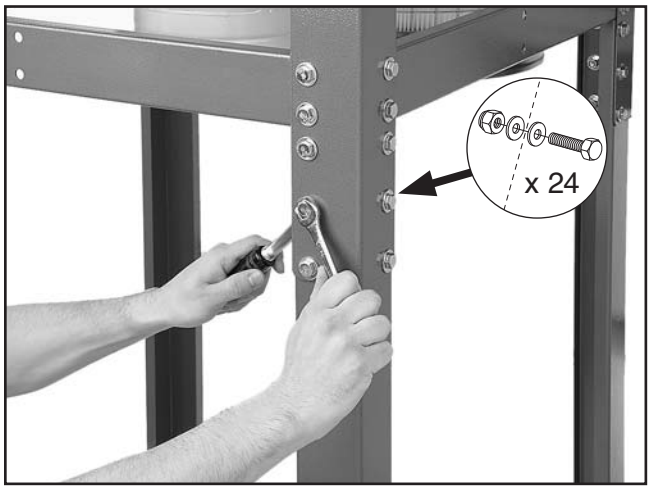


Figure 28. Attaching lower legs to the initial stand assembly.

23. Attach the casters to the bottom of the lower collection drum, as shown in **Figure 29**, using the (4) 3/8"-16 hex nuts, (8) 3/8" flat washers, and (4) 3/8" lock washers included in the box with the casters.

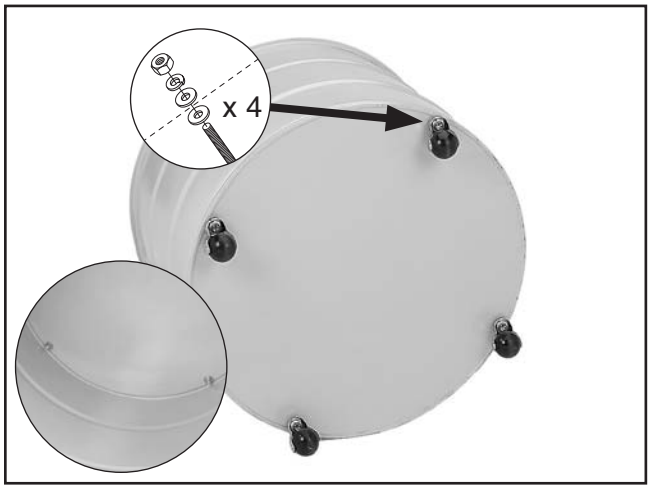


Figure 29. Casters attached to the lower collection drum.

24. Connect the upper and lower collection drums together with the included metal clamp and the provided hex bolt and nut, as shown in **Figure 30.**

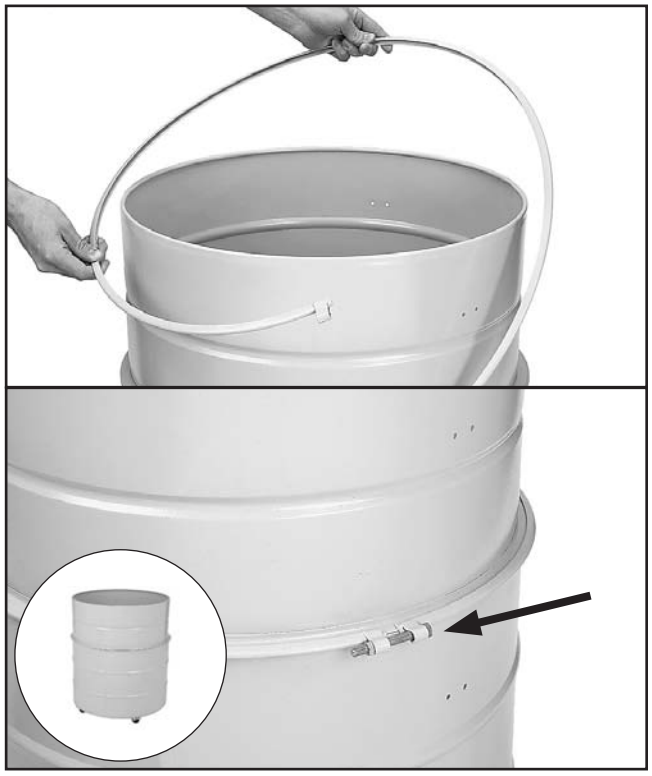


Figure 30. Installing metal clamp around collection drum.

25. Place the collection drum vacuum ring on the bottom of the collection drum (see **Figure 31**).

Note: *During operation, this ring and the vacuum connection to the cyclone funnel will prevent the collection bag from collapsing.*

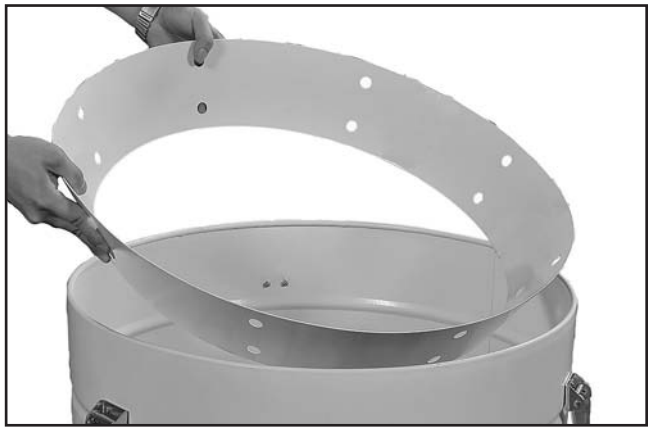


Figure 31. Inserting collection drum vacuum ring.

26. Install the three drum latches, as shown in **Figure 32**, with the (6) 10-24 x ⅜" Phillips head screws and (6) 10-24 hex nuts included in the box with the drum latches.

Use the remaining (6) 10-24 x ⅜" Phillips head screws and (6) 10-24 hex nuts to plug the lower latch mounting holes.

Note: *To avoid bag snags, face the screw heads inside of the drum with the shanks facing outward.*

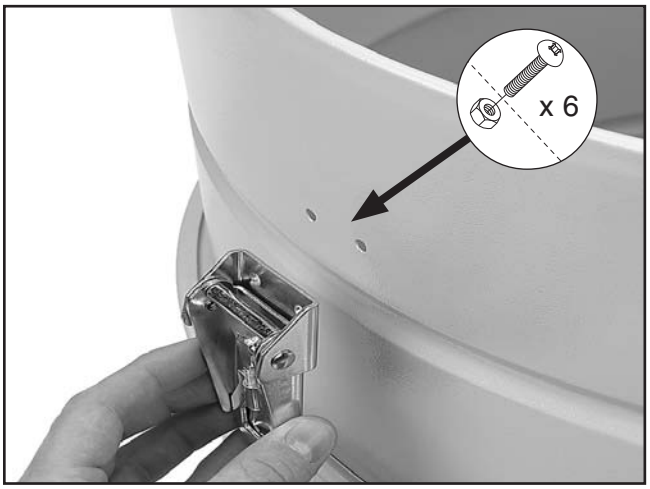


Figure 32. Installing the latches onto the collector drum.

27. Slide the rubber seal over the top lip of the collection drum rim. Pay special attention to the direction of the seal, as shown in the **Figure 33**.

Tip: *Use an adhesive to keep the seal in place.*

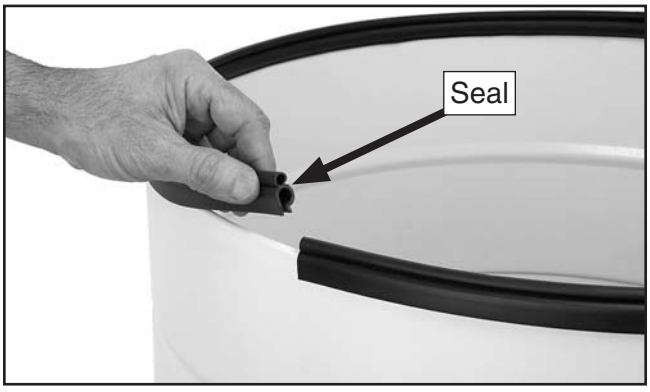


Figure 33. Installing drum lid seal.

28. Install the larger plastic collection bag into the drum, place the lid on it and hook the latch over the lid, as shown in **Figure 34**, then clamp it in place.

Figure 34. Latch hooked over the lid for clamping.

29. Move the collector drum under the cyclone assembly and connect it with the clear flexible hose and the two 9" hose clamps, as shown in **Figure 35.**

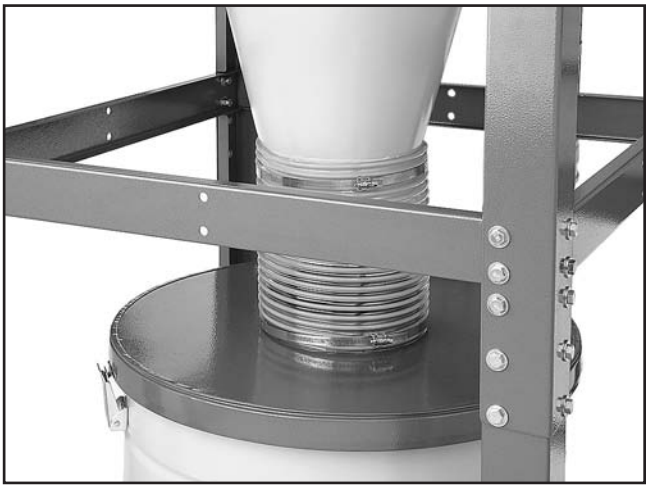


Figure 35. Drum attached to cyclone funnel with clear 9" hose.

30. Fit the plastic collection bags over the bottom of the filters and clamp them in place with the metal bag clamps, as shown in **Figure 36**.

Figure 36. Canister filter collection bag installed.

31. Connect the vacuum hose to the cyclone funnel and collection drum vacuum ports with (2) 1¼" hose clamps (see **Figure 37**).

Figure 37. Connecting the vacuum hose.

32. Slide the reducer over the inlet port on the barrel (**Figure 38**), line up the mounting holes, and secure it in place with the (3) M4 x 12 sheet metal screws.

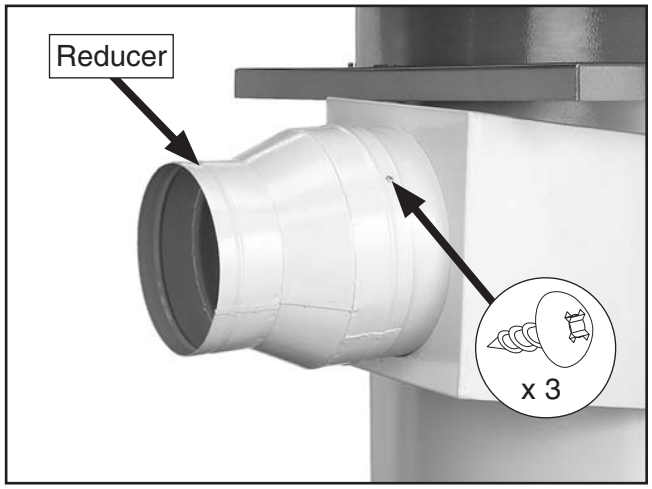


Figure 38. Reducer installed.

33. Secure the vacuum hose inside the upper and lower stand legs with the (2) U-shaped clips (see **Figure 39**).

Figure 39. Securing the vacuum hose to the stand legs.

34. Mount the switch on the stand, as shown in **Figure 40**, with (2) ⅜"-16 x ¾" hex bolts, (4) ⅜" flat washers, and (2) ⅜"-16 hex nuts.

Figure 40. Switch mounted to stand.

Note: *The hand-held remote control uses IR (infrared) to communicate with the control box receiver port, and must have direct line-of-sight to the control box face. Locate the control box with this in mind.*

Test Run

When the assembly is complete, test run the dust collection system to make sure it operates properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the **Troubleshooting** on **Page 49**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To test run the dust collection system:

1. Make sure you have read the safety instructions at the beginning of the manual and that the machine is set up properly.

2. Make sure all tools and objects used during setup are cleared away from the machine.

3. Review the **Circuit Requirements** section beginning on **Page 13** and connect the machine to the power source.

4. Flip the main power switch at the lower left hand corner of the control box to the ON ("I") position to enable power to the switch.

5. Press the ON/OFF button to turn the machine ***ON***. Make sure your hand stays poised over the switch in case you need to quickly turn the machine ***OFF***.

6. Listen and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.

   —If you suspect any problems, immediately turn the machine ***OFF,*** then disconnect the machine from power. Refer to **Troubleshooting** on **Page 49** to identify and fix any problems.

   —If you cannot solve the problem with the use of the **Troubleshooting** guide, contact our Tech Support at (570) 546-9663 for assistance.

7. Press the TIMER button on the control box and cycle through each of the times to make sure the indicators light.

8. Press the TIMER button on the remote control and cycle through the times in the same manner as **Step 7**.

9. Toggle the ON/OFF button on both the control box and the remote control to make sure they are working properly.

⚠DANGER

If any part of your body contacts the spinning impeller, severe cutting or amputation injuries will occur. Always keep yourself and tools away from the impeller when the machine is connected to power.

For Model G0601 Only

The Model G0601 uses a 3-phase motor. For proper operation, the impeller inside the blower housing must rotate *counterclockwise* when viewed from above. Since the motor and impeller are directly connected, you must verify that the motor rotates in the correct direction.

10. Use a ladder to safely observe the motor fan through the top motor cover as another person turns the machine ***ON*** and ***OFF***.

    —If the motor fan rotates *counterclockwise* when viewed from above, the rotation direction is correct.

    —If the motor fan rotates *clockwise* when viewed from above, the rotation direction is incorrect and the motor is wired out-of-phase. Perform the **Correcting Phase Polarity** procedure on **Page 17** to correctly wire the machine to the power source so that the motor and impeller spin *counterclockwise* when viewed from above.

SECTION 4: SYSTEM DESIGN

General

The Model G0442/G0601 is designed to be a central dust collector system. The large suction capacity of the Model G0442/G0601 allows great flexibility in planning and designing of the dust collection duct layout.

Note: *Check local codes concerning the use of dust collecting machines before deciding the placement of the machine.*

Grizzly offers a complete line of dust collection accessories for setting up a stationary system. Additionally, Grizzly offers a complete guide book titled **Dust Collection Basics**.

Whatever system design you choose, always make sure there are no open flames (including pilot lights) in the same room as the dust collector; otherwise you risk an explosion if dust is dispersed into the air.

Ducting Materials

You have many choices regarding main line and branch line duct material. For best results, use metal duct for the main line and branch lines, then use a short length of flexible hose to connect each machine to the branch lines.

Plastic duct is also a popular material for home shops. However, be aware that there is a fire or explosion hazard if plastic duct material is used for dust collection without being grounded against static electrical charge build-up. This topic will be discussed later in the manual. Another problem with using plastic is that it is less efficient per foot than metal.

Metal Duct

Advantages of metal duct (see **Figure 41**) is its conductivity and that it does not contribute to static electrical charge build-up. However, static charges are still produced when dust particles strike other dust particles as they move through the duct. Since metal duct is a conductor, it can be grounded quite easily to dissipate any static electrical charges.

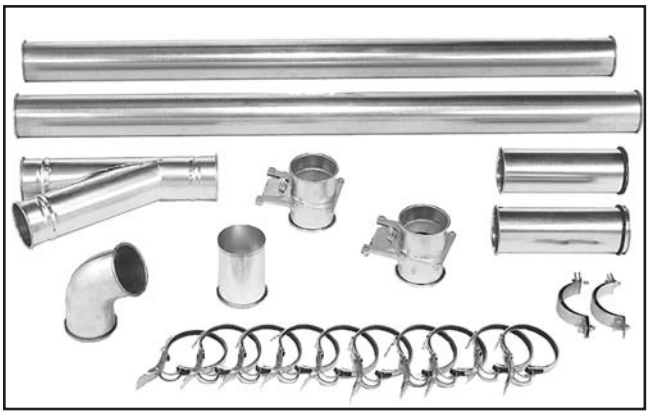


Figure 41. Examples of metal pipe and components.

There are quite a number of options when it comes to metal duct, but metal duct that is specially manufactured for dust collection is the best choice. When selecting the metal duct, choose high quality metal duct with smooth welded internal seams that will minimize airflow resistance. This type of duct usually connects to other ducts or elbows with a simple, self-sealing clamps, is very quick and easy to assemble, and can be dismantled and re-installed with no problems. This is especially important if you ever need to change things around in the shop or add more tools. See the **Accessories** section on **Page 44** for examples.

Avoid inferior metal duct that requires you to cut it to length and snap it together. This type of duct is time consuming to install because it requires you to seal all the seams with silicone and screw the components on the ends with sheet metal screws. Another disadvantage is the rough internal seams and crimped ends that unavoidably increase static pressure.

Flexible Duct

Flexible hose is generally used for short runs, small shops and at rigid duct-to-tool connections. There are many different types of flex hose on the market today. These are manufactured from materials such as polyethylene, PVC, cloth hose dipped in rubber and even metal, including steel and aluminum.

The superior choice here is metal flex hose (see **Figure 42**) that is designed to be flexible, yet be as smooth as possible to reduce static pressure loss.

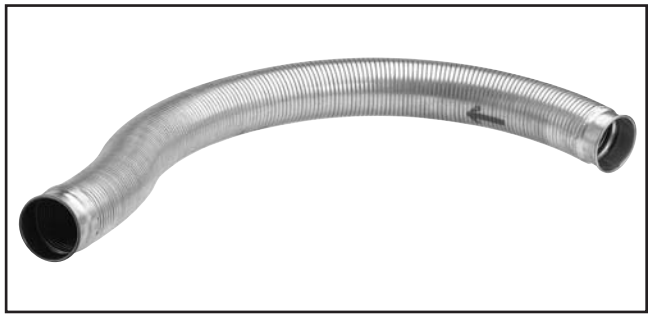


Figure 42. Example of flexible metal duct.

There are also many kinds of pure plastic flexible hose, such as non-perforated drainage type hose and dryer vent hose. Drainage type hose, while being economical, does not quite have the flexibility required for dust collection. The inside of the duct is also deeply corrugated and can increase the static pressure loss by as much as 50% over smooth wall duct. Dryer vent hose, while being completely flexible, is non-resistant to abrasion and has a tendency to collapse in a negative pressure system. We DO NOT recommend using dryer vent hose in the dust collection system.

If using flex-hose, you should choose one of the many types that are designed specifically for the movement of solid particles, i.e. dust, grains and plastics. However, the cost of specifically designed flexible duct can vary greatly. Grizzly offers polyethylene hose, which is well suited for the removal of particulate matter, especially sawdust, since it is durable and completely flexible. Polyethylene is also very economical and available in a wide variety of diameters and lengths for most applications.

Plastic Duct

The popularity of plastic duct (see **Figure 43**) is due to the fact that it is an economical and readily available product. It is also simple to assemble and easily sealed against air loss. The primary disadvantage of plastic duct for dust collection is the inherent danger of static electrical build-up.

Figure 43. Example of plastic duct and components.

Designing Ducting System

Step 1: Decide Who Will Design

For most small-to-medium sized shops, you can design and build the dust collection system yourself without hiring engineers or consultants. We have included some information here to get you started on a basic design.

If you have a large shop or end up designing a complicated system, then we recommend that you do additional research beyond this manual, or that you seek the help of an expert.

Step 2: Sketch The Shop Layout

When designing a successful dust collection system, planning is the most important step. In this step, you must sketch a basic layout of the shop.

Before you get out your pencil and paper, we recommend you visit our FREE *Workshop Planner* available on our website at **www.grizzly.com**.

Our *Workshop Planner* will allow you to quickly and easily draw and print a basic shop layout. Don't worry, non-Grizzly brand machines can be substituted with Grizzly machines for layout purposes.

Note: *After you're finished, make sure to save your layout for later modification.*

Your sketch only needs the basic details of the shop layout, similar to **Figure 44**, including all the current/planned machines and the planned placement of the dust collector.

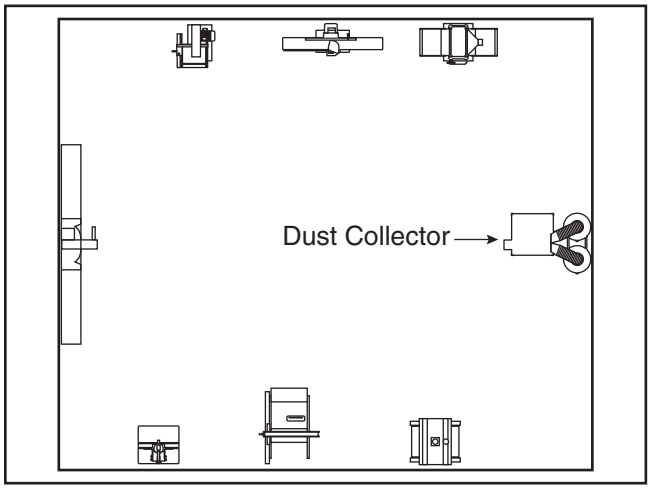


Figure 44. Initial sketch of shop layout.

Step 3: Sketch a Basic Duct Layout

For the next step, sketch how you will connect the machines to the dust collector. Consider these general guidelines for an efficient system:

1. Machines that produce the most saw dust should be placed nearest to the dust collector (i.e. planers and sanders).

2. Ideally, you should design the duct system to have the shortest possible main line and secondary branch ducts. See **Figures 45–46** for ideas of good duct layouts versus bad duct layouts.

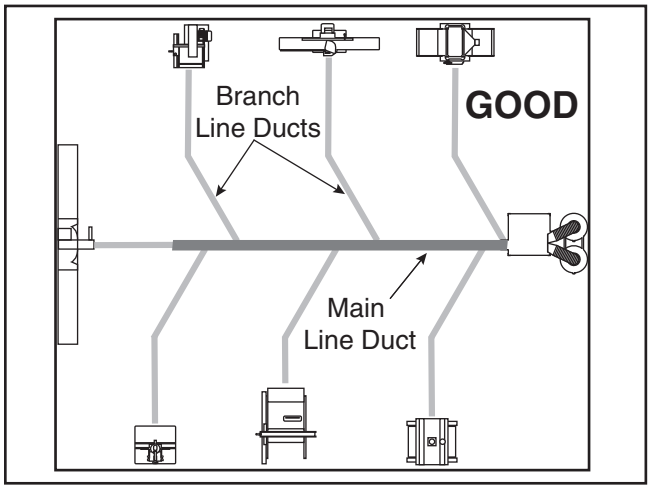


Figure 45. Good duct layout.

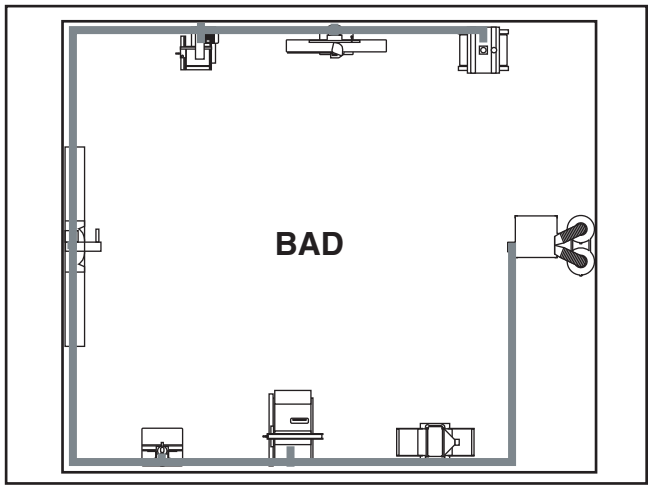


Figure 46. Bad duct layout.

3. Directional changes should be kept to a minimum. The more directional change fittings you use directly increases the overall resistance to airflow.

4. Gradual directional changes are more efficient than sudden directional changes (i.e. use the largest corner radius possible when changing hose or pipe direction).

5. Each individual branch line should have a blast gate immediately after the branch to control suction from one machine to another.

6. The simpler the system, the more efficient and less costly it will be.

Step 4: Determine CFM of Each Machine

Since each machine produces a different amount of sawdust, the requirements for the minimum amount of air flow or CFM (cubic feet per minute) to move that sawdust is unique to the machine (for example, a planer produces more sawdust than a table saw). Knowing this required CFM is important to gauging which size of duct to use.

The chart in **Figure 47** will give you a close estimation of the airflow the machine requires. Keep in mind that machines that generate the most sawdust should be placed closest to the dust collector. If the machine has multiple dust ports, the total CFM required is the sum of all ports.

Machine Dust Port Size	Approximate Required CFM
2"	98
2.5"	150
3"	220
4"	395
5"	614
6"	884
7"	1203
8"	1570
9"	1990
10"	2456

Figure 47. Approximate required airflow for machines, based on dust port size.

If the machine doesn't have a built in dust port, use **Figure 48** as a guide to determine which size of dust port to install on the machine.

Machine	Average Dust Port Size
Table Saw	4"
Miter/Radial-Arm Saw	2"
Jointer (6" and smaller)	4"
Jointer (8"-12")	5"
Thickness Planer (13" and smaller)	4"
Thickness Planer (14"-20")	6"
Shaper	4"
Router (mounted to table)	2"
Bandsaw	4"
Lathe	4"
Disc Sander (12" and smaller)	2"
Disc Sander (13-18")	4"
Belt Sander (6" and smaller)	2"
Belt Sander (7"-9")	3"
Edge Sander (6" x 80" and smaller)	4"
Edge Sander (6" x 80" and larger)	5"
Drum Sander (24" and smaller)	2 x 4"
Drum Sander (24" and larger)	4 x 4"
Widebelt Sander (18" and smaller)	5"
Widebelt Sander (24"–37" single head)	2 x 6"
Widebelt Sander (24"_51" double head)	5 x 4"

Figure 48. Dust port size and quantity per average machine.

Write the required CFM for each machine on the sketch, as shown in **Figure 49**.

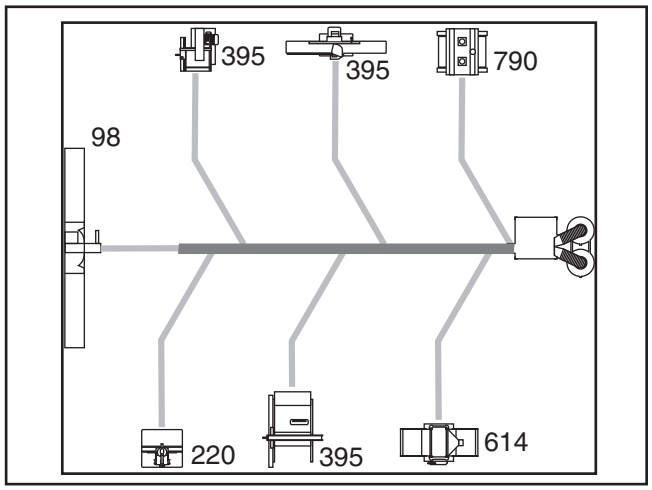


Figure 49. CFM requirements labeled for each machine.

Determining Main Line Duct Diameter

The general rule of thumb for a main line duct is that the velocity of the airflow must not fall below 3500 FPM.

For small/medium sized shops, using the inlet size of the dust collector as the main line duct size will usually keep the air velocity above 3500 FPM and, depending on the system, will allow you to keep multiple branches open at one time.

For the Model G0442/G0601 this is 8" with the reducer installed. Mark your drawing as in **Figure 50**.

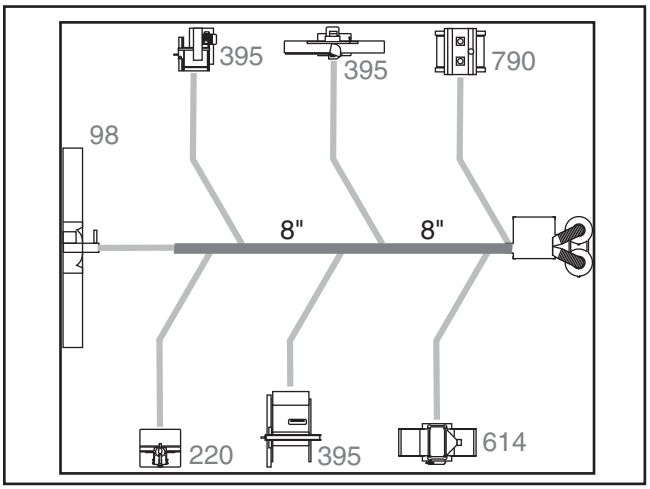


Figure 50. Main line size labeled on sketch.

Determining Branch Line Duct Diameter

The general rule of thumb for a branch line duct is that the velocity of the airflow must not fall below 4000 FPM.

For small/medium sized shops, using the dust port size from the machine as the branch line duct size will achieve the correct velocity in most applications. However, if the dust port on the machine is smaller than 4", make the branch line 4" and neck the line down right before the dust port.

Note: *Systems with powerful dust collectors work better if multiple blast gates are left open. This also allows you to run two machines at once. Experiment with different combinations of blast gates open/closed to find the best results for the system.*

Write the determined branch line sizes on the drawing, as shown in **Figure 51**.

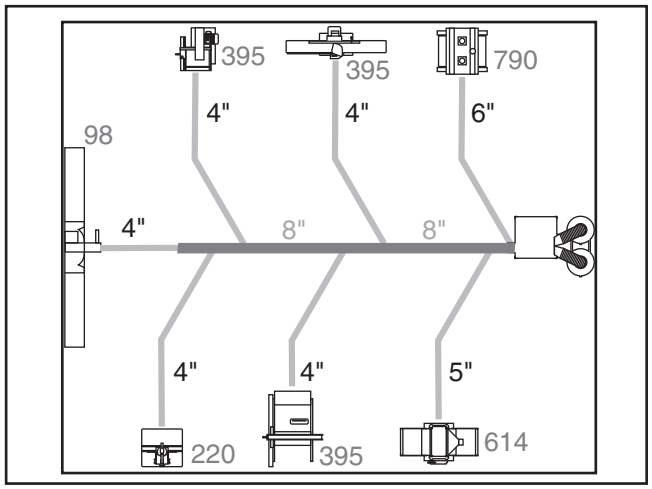


Figure 51. Branch line sizes labeled on sketch.

Multiple Dust Ports

If the machine has multiple dust ports, add the total CFM given for each dust port size from **Figure 47** on **Page 36**. Refer to the chart in **Figure 52** and find the CFM that is closest to the total to determine the correct branch size. Split the branch line just before the dust ports with matching duct sizes.

Total CFM	Branch Line Size
600	5"
700	5"
800	6"
1000	6"
1200	7"
1400	8"
1600	8"

Figure 52. Branch line sizing chart by total CFM (for use when multiple machines share line).

Two Machines on Same Branch Line

If both machines will be running at the same time, add the total CFM given for each dust port size from **Figure 47** on **Page 36**.

If both the machines will never be run at the same time, reference the machine with biggest dust port to **Figure 52** and add blast gates after the Y-branch to open/close the line to each machine.

Calculating Duct Resistance

Adding duct work, elbows, branches and any other components to a duct line increases airflow resistance (static pressure loss). This resistance can be minimized by using rigid (smooth) pipe and gradual curves, as opposed to flexible pipe and 90˚ elbows.

To help you think about this resistance, imagine riding a bicycle in a tunnel that is an exact replica of the duct work. If the inside of the tunnel is very bumpy (flexible pipe) and has a lot of sharp turns (90˚ elbows), it will take a lot more effort to travel from one end to the other.

The purpose of calculating the resistance is to determine if it is low enough from the machine to the dust collector to meet the given CFM requirement for the machine. Use the charts in **Figure 53** to calculate the resistance of duct work.

Duct Dia.	Approximate Static Pressure Loss Per Foot of Rigid Pipe		Approximate Static Pressure Loss Per Foot of Flex Pipe	
	Main Lines at 3500 FPM	Branch Lines at 4000 FPM	Main Lines at 3500 FPM	Branch Lines at 4000 FPM
2"	0.091	0.122	0.35	0.453
2.5"	0.08	0.107	0.306	0.397
3"	0.071	0.094	0.271	0.352
4"	0.057	0.075	0.215	0.28
5"	0.046	0.059	0.172	0.225
6"	0.037	0.047	0.136	0.18
7"	0.029	0.036	0.106	0.141
8"	0.023	0.027	0.08	0.108
9"	0.017	0.019	0.057	0.079

Fitting Dia.	90˚ Elbow	45˚ Elbow	45˚ Wye(Y)	90˚ Wye(Y)
3"	0.47	0.235	0.282	0.188
4"	0.45	0.225	0.375	0.225
5"	0.531	0.266	0.354	0.236
6"	0.564	0.282	0.329	0.235
7"	0.468	0.234	0.324	0.216
8"	0.405	0.203	0.297	0.189

Figure 53. Static pressure loss charts.

In most small/medium shops it is only necessary to calculate the line with the longest duct length or the most fittings (operating under the assumption that if the line with the highest resistance works, the others will be fine).

To calculate the static pressure of any given line in the system:

1. Make a list of each size duct in the line, including the length, and multiply those numbers by the static pressure value given in **Figure 53**.

2. List each type of elbow or branch and multiply the quantity (if more than one) by the static pressure loss given in **Figure 53**.

3. Add the additional factors from **Figure 54** to the list.

Additional Factors	Static Pressure
Seasoned (well used) Dust Collection Filter	1"
Entry Loss at Large Machine Hood	2"

Figure 54. Additional factors affecting static pressure.

4. Total the list as shown in the example in **Figure 55** to come up with the overall static pressure loss number for that line.

   Note: *Always account for a seasoned filter, so you don't end up with a system that only works right when the filter is clean.*

Main Line
6" Rigid Pipe (0.037) at 20' 0.740

Branch Line
4" Rigid Pipe (0.075) at 10' 0.750
4" Flex Pipe (0.28) at 5' 1.400

Elbows/Branches
6" 45˚ Y-Branch 0.329
4" 45˚ Elbow 0.225

Additional Factors
Seasoned Filter 1.000

Total Static Pressure Loss 4.444

Figure 55. Example list for totaling SP loss.

Note: *When calculating static pressure loss to determine if multiple lines can be left open at the same time, only include the main line numbers once.*

5. Compare the total static pressure loss for that line to the closest CFM given in the **Performance Curve** section on the **Machine Data Sheet** for your dust collector on **Page 6** (Model G0442) or **Page 9** (Model G0601).

Example: The Model G0601 Data Sheet Performance Curve is illustrated in **Figure 56**. Find 4.4 on the Static Pressure axis (the amount of total static pressure loss calculated in **Figure 55**), then refer to the closest value on the CFM axis—approximately 1785 CFM.

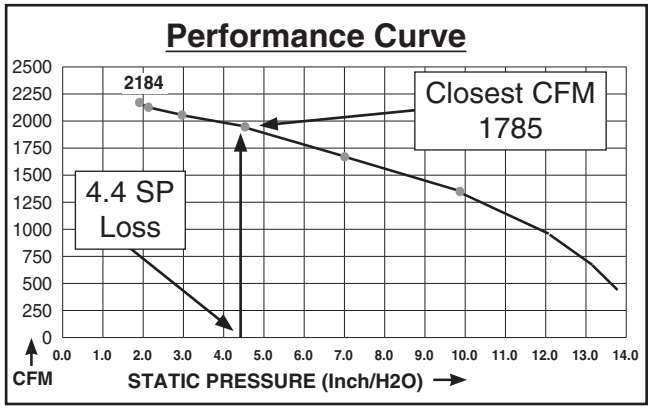


Figure 56. CFM for static pressure loss for the duct line connected in the example layout (220 CFM).

The 1785 CFM for the static pressure loss of the line connected to the router is well above the 220 CFM requirement of that machine.

—If the CFM for the static pressure loss is above the requirement of the machine connected to the end of that branch line, then dust collection will most likely be successful. Congratulations! You've just designed your own dust system.

—If the CFM for the static pressure loss is below the requirement of the machine, then that line will not effectively collect the dust. You must then modify some of the factors in that line to reduce the static pressure loss. Some of the ways to do this include: 1) Installing larger duct, 2) reducing amount of flexible duct used, 3) increasing machine dust port size, 4) moving machine closer to dust collector to eliminate duct length, and 5) reducing 90˚ elbows or replacing them with 45˚ elbows.

System Grounding

Since plastic hose is abundant, relatively inexpensive, easily assembled and air tight, it is a very popular material for conveying dust from woodworking machines to the dust collector. We recommend using flexible hose (flex-hose) to connect the woodworking machine to the dust collector. However, plastic flex-hose and plastic duct are an insulator, and dust particles moving against the walls of the plastic duct create a static electrical build up. This charge will build until it discharges to a ground. If a grounding medium is not available to prevent static electrical build up, the electrical charge will arc to the nearest grounded source. This electrical discharge may cause an explosion and subsequent fire inside the system.

To protect against static electrical build up inside a non-conducting duct, a bare copper wire should be placed inside the duct along its length and grounded to the dust collector. You must also confirm that the dust collector is continuously grounded through the electrical circuit to the electric service panel.

If you connect the dust collector to more than one machine by way of a non-conducting branching duct system and blast gates, the system must still be grounded as mentioned above. We recommend inserting a continuous bare copper ground wire inside the entire duct system and attaching the wire to each grounded woodworking machine and dust collector.

⚠WARNING

Always guard against static electrical build up by grounding all dust collection lines.

Be sure that you extend the bare copper wire down all branches of the system. Do not forget to connect the wires to each other with wire nuts when two branches meet at a “Y” or “T” connection.

Ensure that the entire system is grounded. If using plastic blast gates to direct air flow, the grounding wire must be jumped (**Figure 57**) around the blast gate without interruption to the grounding system.

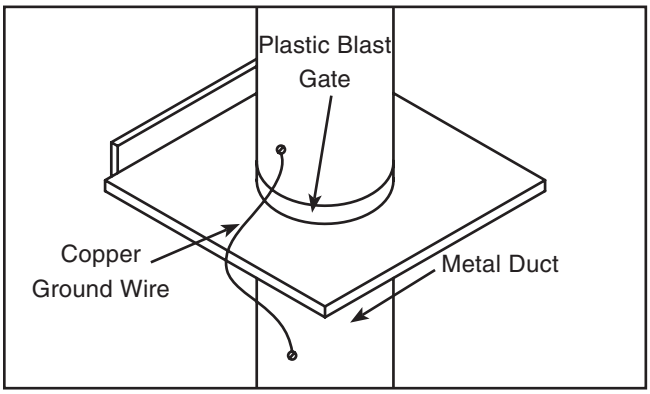


Figure 57. Ground jumper wire when using plastic blast gates and metal duct.

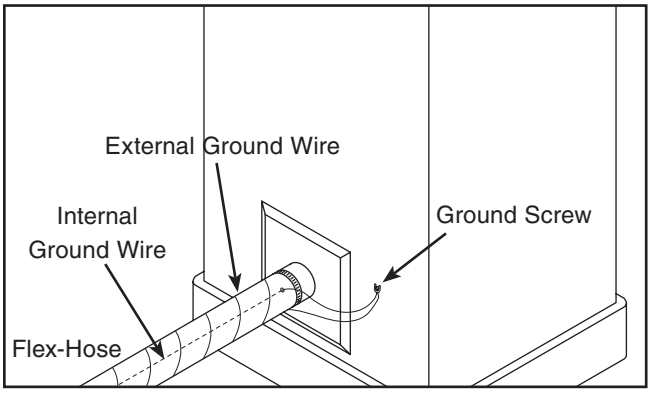


Figure 58. Flex-hose grounded to machine.

We also recommend wrapping the outside of all plastic ducts with bare copper wire to ground the outside of the system against static electrical build up. Wire connections at Y’s and T’s should be made with wire nuts.

Attach the bare ground wire to each stationary woodworking machine and attach to the dust collector frame with a ground screw as shown in **Figure 58**. Ensure that each machine is continuously grounded to the grounding terminal in the electric service panel.

SECTION 5: OPERATIONS

⚠WARNING

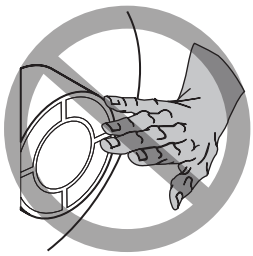
Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.

⚠CAUTION

DO NOT use the dust collector for any other purpose besides collecting dust from connected woodworking machines. A dust collector should NEVER be used as a shop vacuum and IS NOT a substitute for an air filter system. For safest use, wear a respirator and use an air cleaner in addition to the dust collector.

NOTICE

If you have never used this type of machine or equipment before, WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.



⚠WARNING

Do NOT put hands or small objects near inlet openings during operation. Objects sucked into the inlet will meet with the impeller blade. Failure to heed this warning could result in property damage or personal injury.

General

Operating the Model G0442/G0601 is simple and straightforward. Blast gates located at each of the machines controls the air flow from the woodworking machine to the dust collector. If a machine is not being used, keep the blast gate closed to maintain higher levels of efficiency throughout the system.

Remote Control

The remote control for the Model G0442/G0601 is IR (infrared) rather than RF (radio frequency) to prevent accidental startups by other common RF items such as garage door openers.

Because this remote system is IR, the remote control must be pointing directly at the control box with an unobstructed line-of-sight view.

If you place the dust collector in a different room or outside of your shop, you must mount the switch in the shop and wire it through the wall to the dust collector to make use of the remote control.

Note: *The remote control requires two "AA" batteries for operation.*

Control Box Panel

Use the illustration of the control box panel in **Figure 59** and the descriptions that follow to become familiar with the functions of the buttons on the control box.

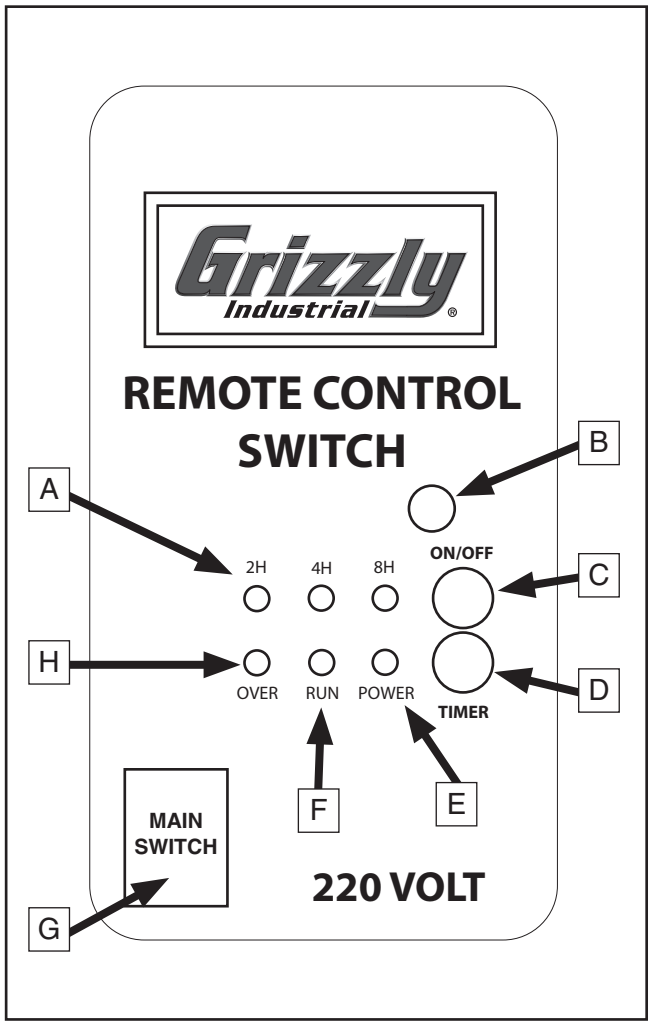


Figure 59. Control box panel.

A. Timer Indicator Lights: Turns ***ON*** when a timer setting is selected.

B. Infrared Port: Receives infrared communication from the remote control.

C. ON/OFF Button: Starts/stops the dust collector motor.

D. Timer Button: Cycles through the available timer settings.

E. Power Light: Indicates when there is power to the control box.

F. Run Light: Illuminates when the dust collector motor is operating.

G. Main Switch: Enables/disables the power flow to the control box and must be turned ON before using ON/OFF button.

H. Overload Light: Turns ON when the dust collector is overloaded and the motor has stopped.

Note: If the overload light illuminates and the motor stops, you must turn the machine ***OFF*** and allow the motor to cool. The overload relay should reset automatically and the light will go out.

If this is a persistent problem, refer to the **Troubleshooting** section on **Page 49** for additional help.

SECTION 6: ACCESSORIES

H5293—4" Metal Duct Starter Kit
H5295—5" Metal Duct Starter Kit
H5297—6" Metal Duct Starter Kit
Save over 20% with this great starter kit. Includes: (2) machine adapters, (10) pipe clamps, (3) 5' straight pipes, (1) branch, (3) pipe hangers, (1) end cap, (3) adjustable nipples, (1) 90˚ elbow, and (1) 60˚ elbow.

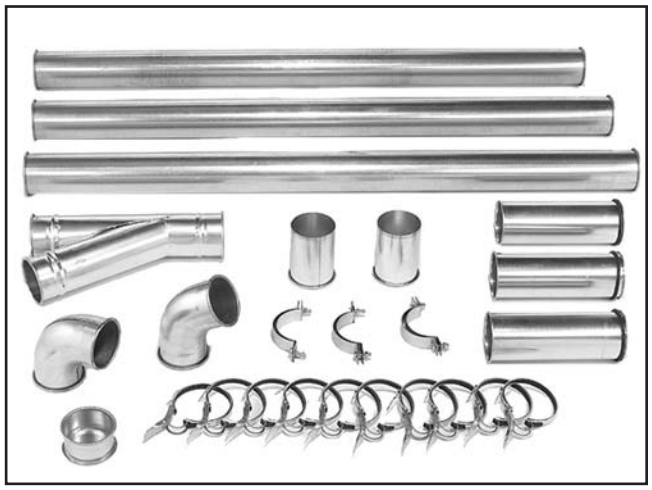


Figure 60. Metal Duct Starter Kit.

H5294—4" Metal Duct Machine Addition Kit
H5296—5" Metal Duct Machine Addition Kit
H5298—6" Metal Duct Machine Addition Kit
Save over 20% with this great machine addition kit. Includes: (2) blast gates, (1) machine adapter, (10) pipe clamps, (2) pipe hangers, (2) 5' straight pipes, (2) adjustable nipples, (1) branch, and (1) 60˚ elbow.

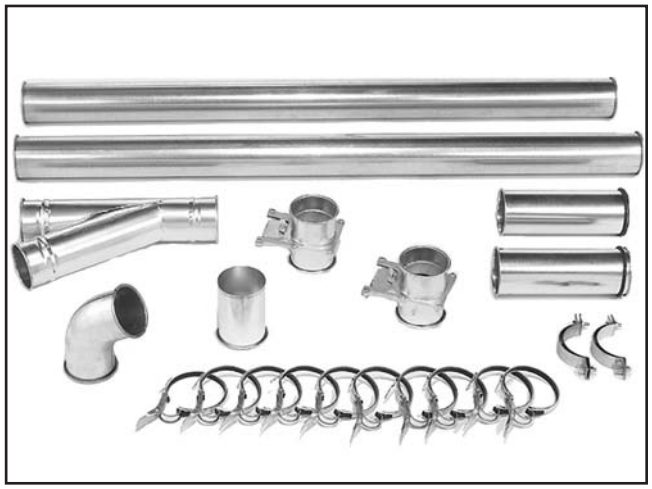


Figure 61. Metal Duct Machine Addition Kit.

G6162—4" x 5' Straight Metal Pipe
G7346—5" x 5' Straight Metal Pipe
G7364—6" x 5' Straight Metal Pipe
H5227—7" x 5' Straight Metal Pipe
H5237—8" x 5' Straight Metal Pipe
H5252—9" x 5' Straight Metal Pipe
These laser welded straight pipes ensure a super smooth internal seam. Ends easily clamp together for a sealed fit without screws or silicone.

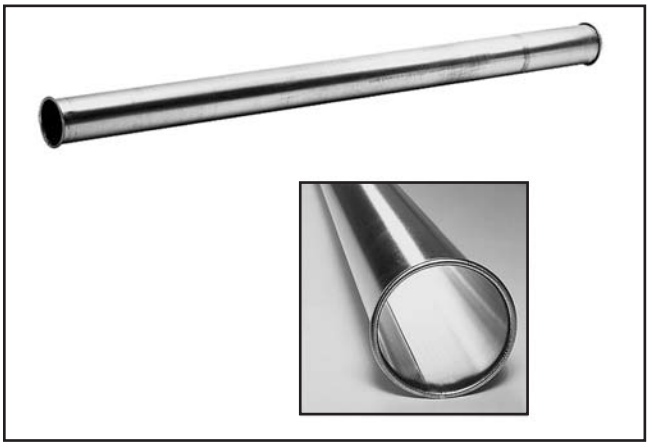


Figure 62. Straight Metal Pipe.

H7216—5" x 5' Rigid Metal Flex Hose
H7217—6" x 5' Rigid Metal Flex Hose
H7218—7" x 5' Rigid Metal Flex Hose
H7219—8" x 5' Rigid Metal Flex Hose
H7220—9" x 5' Rigid Metal Flex Hose
This flex hose provides just enough flexibility to make difficult connections while still keeping the inside wall as smooth as possible to minimize static pressure loss.

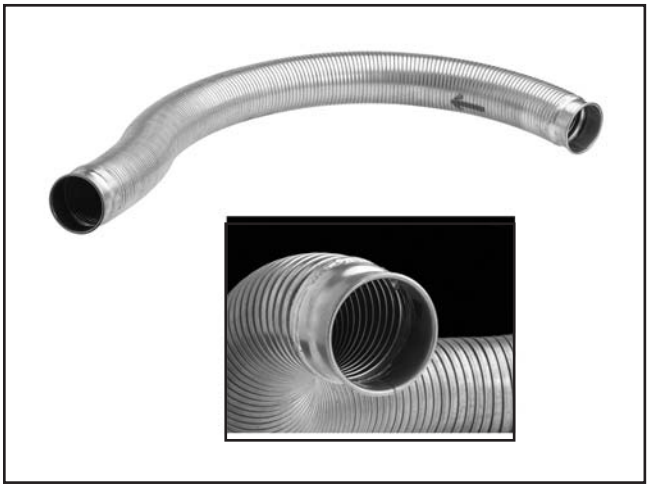


Figure 63. Rigid Metal Flex Hose.

Metal Elbows
These industrial metal elbows are available from 4"–8" with 90˚, 60˚, 45˚, or 30˚ curves. Also, available with a 90˚ long radius curve. Call (800) 523-4777 or visit **www.grizzly.com** for more information and pricing.

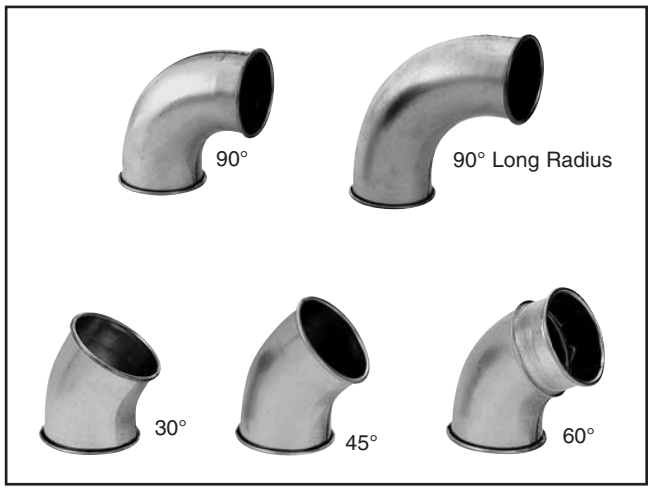


Figure 64. Metal elbow examples.

G6177—4" Metal Blast Gate
G7340—5" Metal Blast Gate
G7358—6" Metal Blast Gate
H5234—7" Metal Blast Gate
H5249—8" Metal Blast Gate
H5259—9" Metal Blast Gate

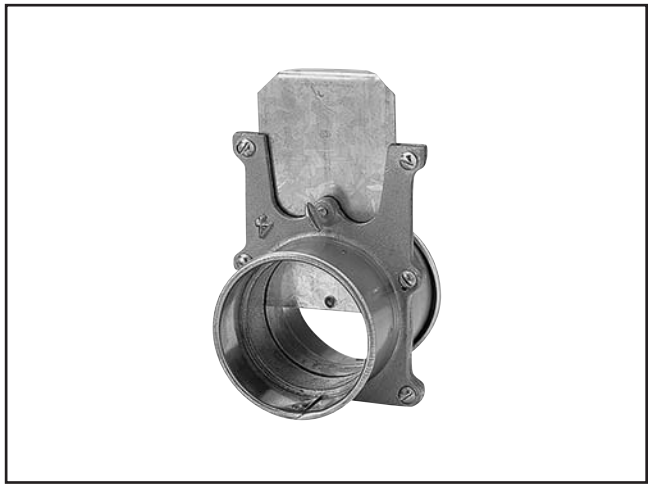


Figure 65. Metal Blast Gate.

Call 1-800-523-4777 To Order

Metal Branches
We carry many different branches, all designed to minimize airflow resistance.

Figure 66. Metal Branches.

Reducers & Adapters
We carry a multitude of reducers and elbows to cover most applications from 4" through 9".

Figure 67. Metal Reducers & Adapters.

G6252—4" Floor Sweep
G7341—5" Floor Sweep
G7342—6" Floor Sweep
Great for cleaning up around the shop, these metal floor sweeps close tight when not in use.

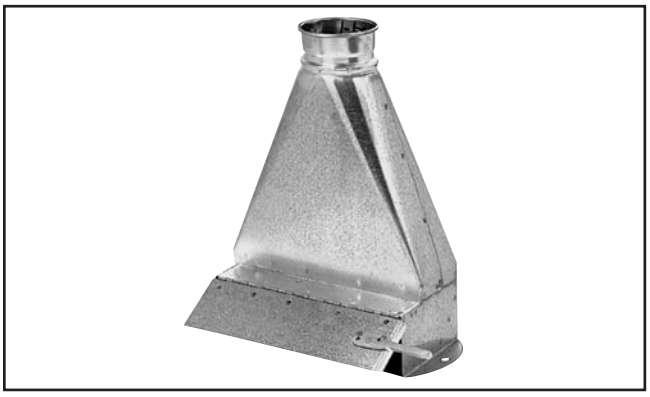
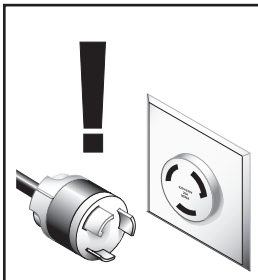


Figure 68. Industrial Floor Sweep.

SECTION 7: MAINTENANCE



⚠WARNING

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

Schedule

For optimum performance from your machine, check the following items during operation. If you notice a problem, resolve it before continuing operation. At the end of the day, make sure the machine is turned ***OFF*** and disconnected from power.

During Operations:
- Dust collection drums and bags.
- Check/repair loose mounting bolts.
- Pressure leaks.
- Worn or damaged wires.
- Any other condition that would hamper the safe and efficient operation of this machine.

Emptying Drum

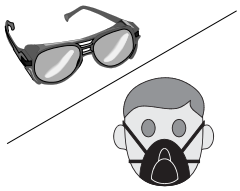
Empty the collection drum when it is no more than ¾ full. If the drum becomes overfilled, the chips will be sucked back into the intake barrel and passed through to the canister filters.

How quickly the drum will fill up is based on the type of work being done at the time.

When first using the machine, check the drum regularly to get an idea of how often it needs to be emptied.

Cleaning Filters

The Model G0442/G0601 dust collector has a gentle brush system inside the canisters for removing any built-up dust from the filter pleats.



⚠CAUTION

To avoid injury to your eyes and lungs from fine airborne particles, always wear safety glasses and a respirator when working with the dust collection bags.

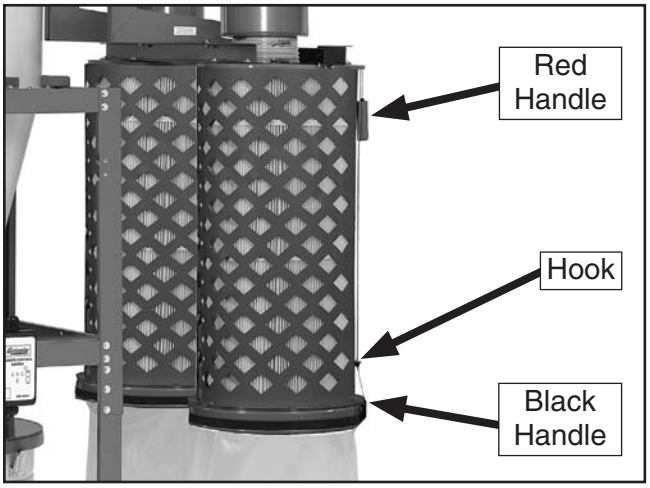


Figure 69. Brush handles for cleaning canister filters.

To clean the filters, pull the red handles down all the way, then pull the black handles down and hook them in place.

Note: *Always make sure to leave the red handles in the up position to ensure that the brushes return to their proper position and do not restrict the filter.*

Rinsing Filter

For a thorough cleaning, the filter can be removed and rinsed off. However, make sure to clean the filter with the brush system first. Allow the filter to air dry. Do not use compressed air on the pleated filter or leave it in the sun to dry—this could damage it.

Removing/Replacing Filter

The filter for the Model G0442/G0601 manufactured since November, 2009, can be removed from the assembly for replacement or rinsing.

Removing/installing the filter requires disconnecting the canister filter assembly from the dust collector and disassembling it. Follow the instructions below to perform this procedure.

Refer to the parts breakdown diagrams and listings beginning on **Page 54** to order the correct filter from Grizzly at 800-523-4777.

Tools Needed	**Qty**
Open-End Wrench 10mm	1
Wrench or Socket 12mm	2

To replace the canister filter:

1. DISCONNECT MACHINE FROM POWER!

2. Use the brush handles to knock the built-up dust from the filter pleats, then remove the bag clamp and collection bag from the canister assembly.

3. Pull the black handle all the way down and secure the cable into the handle hook at the bottom of the canister assembly, as shown in **Figure 70**, to hold it in place during the following steps.

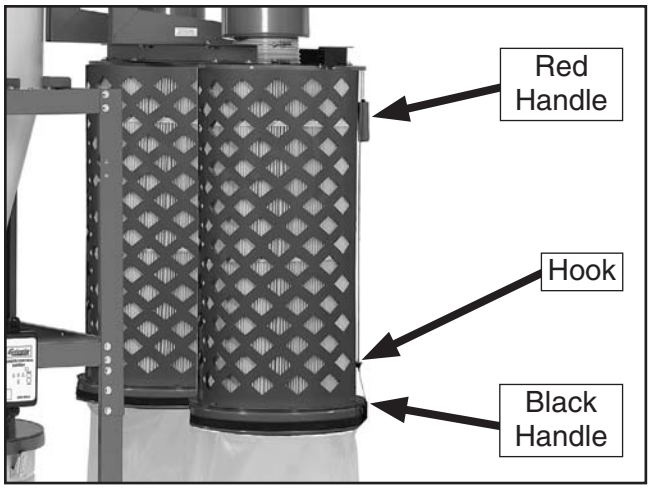


Figure 70. Brush handles in correct position for filter removal.

4. Remove the canister assembly from the dust collector and place it right-side up on a stable, flat surface.

5. Remove the six hex bolts, hex nuts, and flat washers from the rim of the canister base, as shown in **Figure 71**.

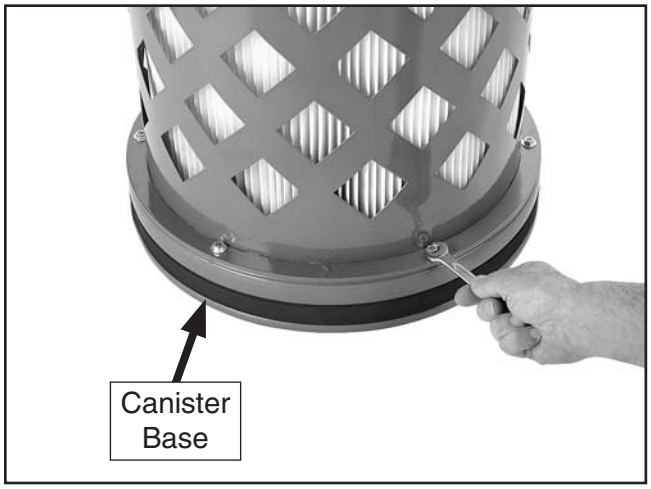


Figure 71. Removing the hex nuts and flat washers from the rim of the canister base.

6. With help from another person to steady the canister assembly, turn it upside down and remove the two hex bolts, hex nuts, and flat washers from the cross support (see **Figure 72**), then remove the canister base from the assembly.

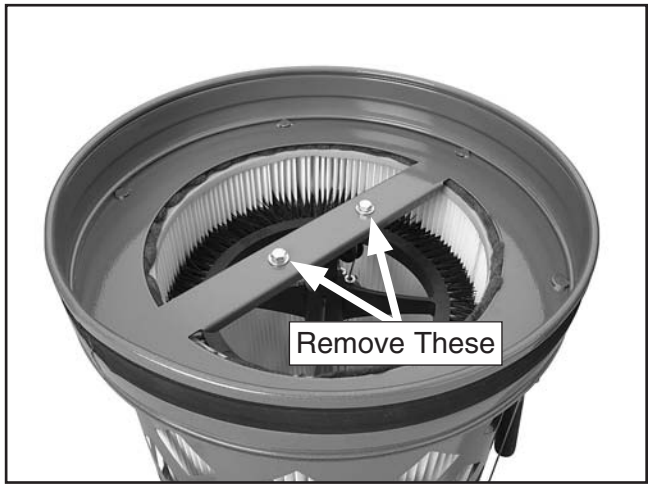


Figure 72. Cross support fasteners.

7. Carefully lift the filter from the canister assembly, as shown in **Figure 73**.

Figure 73. Removing the filter from the canister assembly.

8. Before re-inserting the filter into the assembly, make sure that the filter brush base is aligned with two of the fastener holes around the base of the assembly (see **Figure 74**). This will allow the canister base to align with the fastener holes around the brush base.

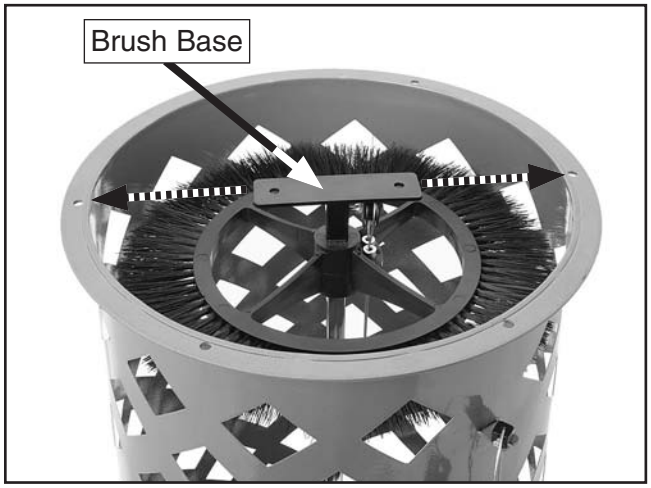


Figure 74. Filter brush base aligned with assembly fastener holes.

9. Re-insert the filter into the canister assembly.

   Note: *Make sure the bristles of the brush are pointed straight into the pleats to ensure efficient cleaning of the filter when needed.*

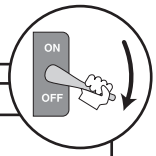
10. Attach the canister base in the reverse order from which you removed it in **Step 6**.

11. Attach the canister assembly to the dust collector, then secure a new collection bag to it with the bag clamp.

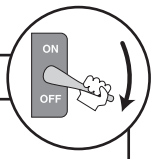
SECTION 8: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust the machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

Troubleshooting



Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	1. Wall fuse/circuit breaker is blown/tripped.	1. Ensure circuit size is suitable for this machine; replace weak breaker.
	2. Power supply switched OFF or is at fault.	2. Ensure power supply is switched on; ensure power supply has the correct voltage.
	3. Fuse has blown.	3. Correct short/replace fuse in control box.
	4. Hand-held remote controller is at fault.	4. Replace batteries in hand-held remote controller; stay in line-of-sight view and signal range.
	5. (G0442) Start capacitor at fault.	5. Replace start capacitor.
	6. Receiver is at fault.	6. Inspect receiver computer board; replace if faulty.
	7. Motor connection wired incorrectly.	7. Correct motor wiring connections (**Pages 52 & 53**).
	8. Thermal overload relay has tripped.	8. Turn cut-out dial to increase working amps and push the reset pin. Replace if tripped multiple times (weak relay).
	9. Contactor not getting energized/has burnt contacts.	9. Test for power on all legs and contactor operation. Replace unit if faulty.
	10. Wiring is open/has high resistance.	10. Check for broken wires or disconnected/corroded connections, and repair/replace as necessary.
	11. Motor start switch or ON/OFF button is at fault.	11. Replace faulty ON button or ON/OFF switch.
	12. Circuit board is at fault.	12. Inspect circuit board; replace if faulty.
	13. Motor is at fault.	13. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component is loose.	1. Inspect/replace stripped or damaged bolts/nuts, and re-tighten with thread locking fluid.
	2. Machine is incorrectly mounted or sits unevenly.	2. Tighten/replace anchor studs in floor; relocate/shim machine.
	3. Motor fan is rubbing on fan cover.	3. Replace dented fan cover; replace loose/damaged fan.
	4. Motor bearings are at fault.	4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.



Symptom	Possible Cause	Possible Solution
Loud, repetitious noise, or excessive vibration coming from dust collector.	1. Dust collector is not on a flat surface and wobbles. 2. Impeller is loose or damaged and unbalanced. 3. The motor mounting or housing connections are loose. 4. Impeller is loose on the motor shaft. 5. Motor fan cover is dented, causing the motor fan to hit the cover while spinning.	1. Stabilize the dust collector. 2. Disconnect dust collector from power, and inspect the impeller for dents, bends, loose fins. Replace impeller if any damage is found. 3. Make sure all fasteners on the dust collector are tight. 4. Replace the motor and impeller as a set if the motor shaft and the impeller hub are damaged. 5. Replace motor fan cover.
Dust collector does not adequately collect dust or chips; poor performance.	1. Dust collection bags are full. 2. Filters are dirty. 3. (G0601) Motor is wired out of phase and the impeller is rotating in the wrong direction (clockwise). 4. There is a restriction in the duct line. 5. The dust collector is too far away from the point of suction, or there are too many sharp bends in the ducting. 6. The lumber is wet and dust is not flowing through the ducting smoothly. 7. There is a leak in the ducting, or a series of small leaks, or too many open ports. 8. There are not enough open branch lines at one time, thereby causing a velocity drop in the main line. 9. The ducting and ports are incorrectly sized. 10. The machine dust collection design is inadequate. 11. The dust collector is too small for the dust collection system.	1. Empty collection bags. 2. Clean filters. 3. (G0601) Motor is receiving power out-of-phase. Disconnect the machine from power, then swap any two of the incoming hot power leads terminated inside the control box (see **Step 10** on **Page 32**). 4. Remove dust line from dust collector inlet and unblock the restriction in the duct line. A plumbing snake may be necessary. 5. Relocate the dust collector closer to the point of suction, and rework ducting without sharp bends. Refer to **Designing Ducting System**, beginning on **Page 35**. 6. Process lumber with less than 20% moisture content. 7. Rework the ducting to eliminate all leaks. Close dust ports for lines not being used. Refer to **Designing Ducting System** beginning on **Page 35** for more solutions. 8. Open 1 or 2 more blast gates to different branch lines to allow the velocity in the main line to increase. 9. Reinstall correctly sized ducts and fittings. Refer to **Designing Ducting System** beginning on **Page 35** for more solutions. 10. Use a dust collection nozzle on a stand. 11. Install a larger dust collector to power your dust collection system.
Sawdust being blown into the air from the dust collector.	1. Duct clamps or dust collection bags are not properly clamped and secured. 2. Cylinder or funnel seals are loose or damaged.	1. Re-secure ducts and dust collection bag, making sure duct and bag clamps are tight and completely over the ducts and bags. 2. Retighten all mounting and sealing points, replace damaged gaskets.

SECTION 9: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this section carefully. If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine.

⚠WARNING
Wiring Safety Instructions

SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

MODIFICATIONS. Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved aftermarket parts.

WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

CIRCUIT REQUIREMENTS. You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

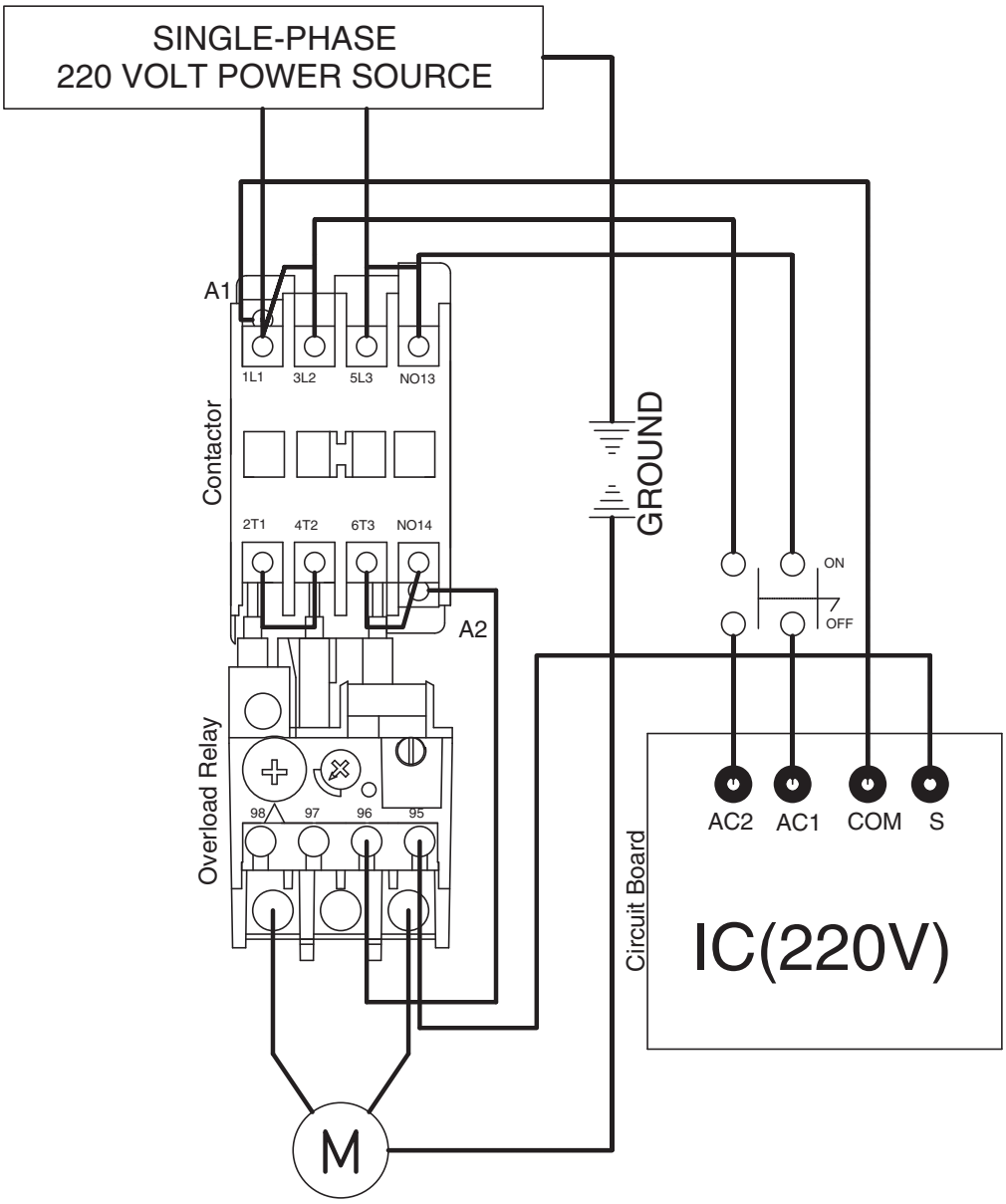
NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TURQUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

G0442 Wiring Diagram



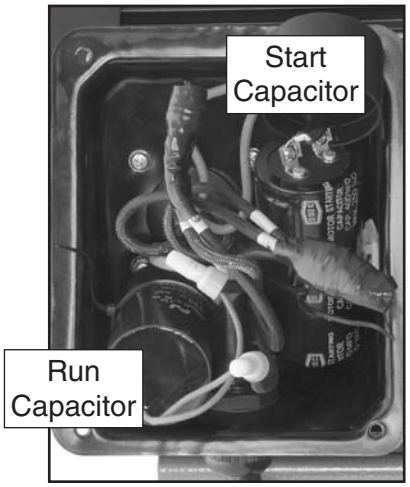


Figure 75. Model G0442 motor wiring.

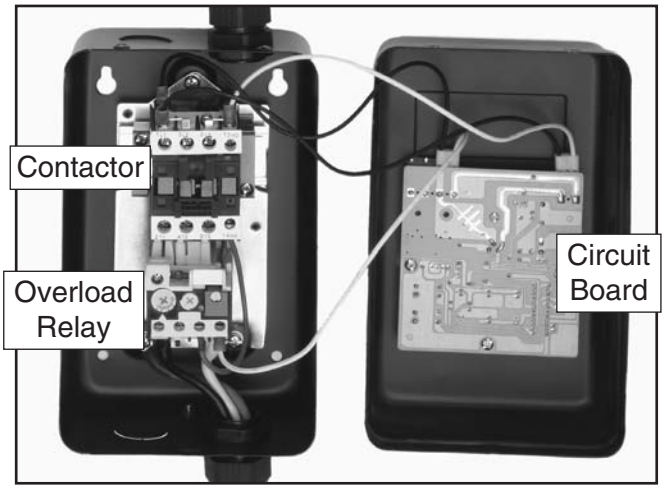
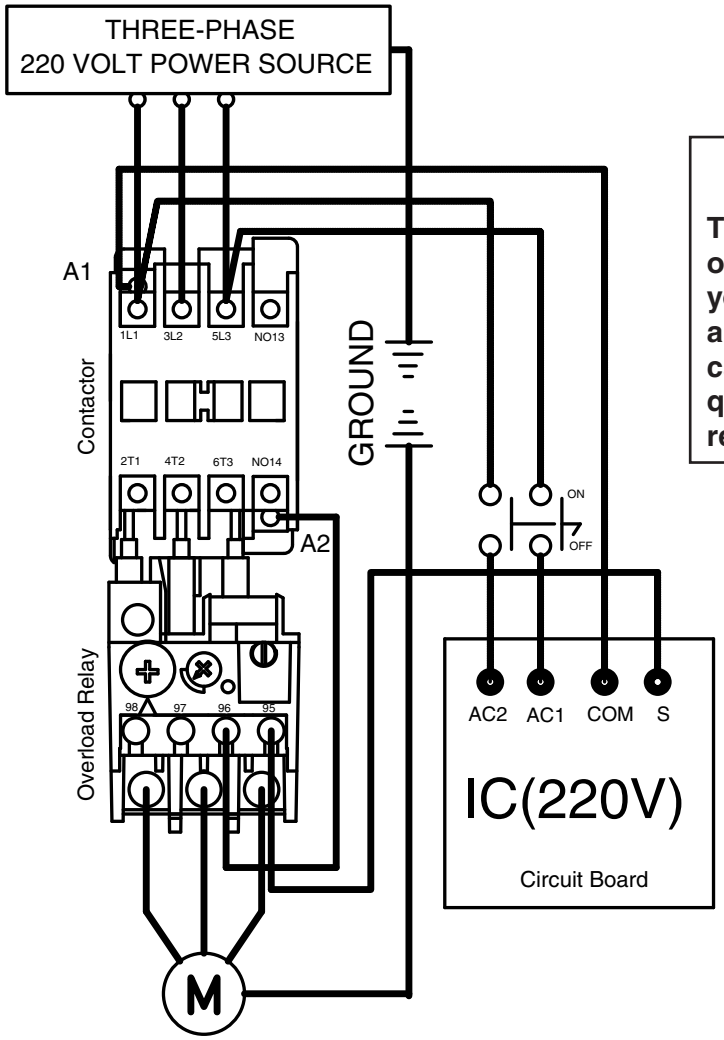


Figure 76. Model G0442 control box wiring.

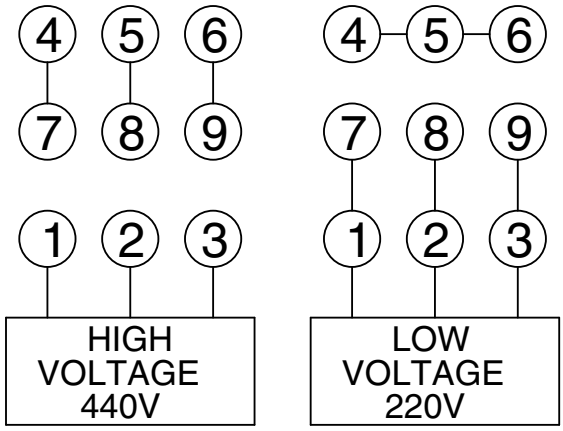
STOP ***READ ELECTRICAL SAFETY ON PAGE 51!***

G0601 Wiring Diagram



NOTICE

The Model G0601 is prewired for 220V operation. To operate your machine at 440V you must replace the 220V control box with a 440V control box—Part 0601003-1, which can be purchased separately. Consult a qualified electrician before attempting to rewire your machine!



Control Box Wiring

Motor Wiring

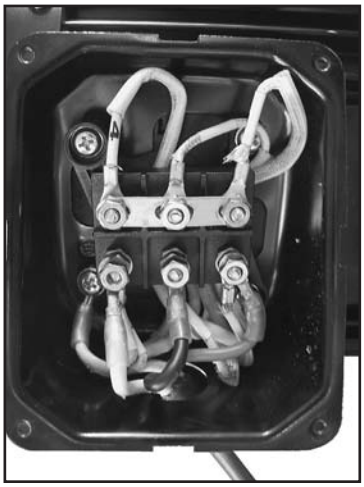


Figure 77. Model G0601 motor wiring.

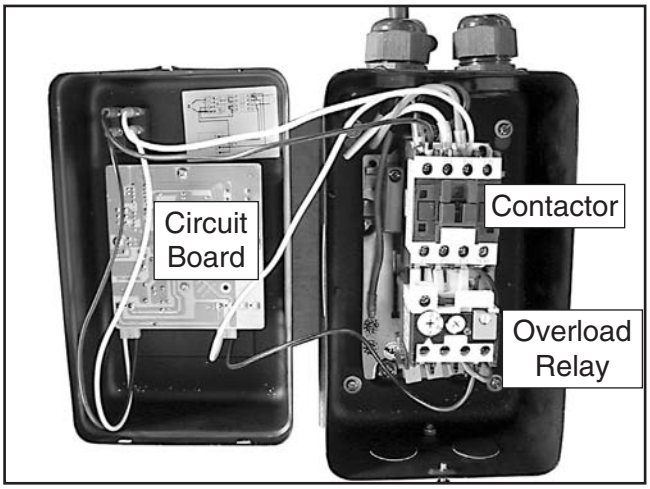
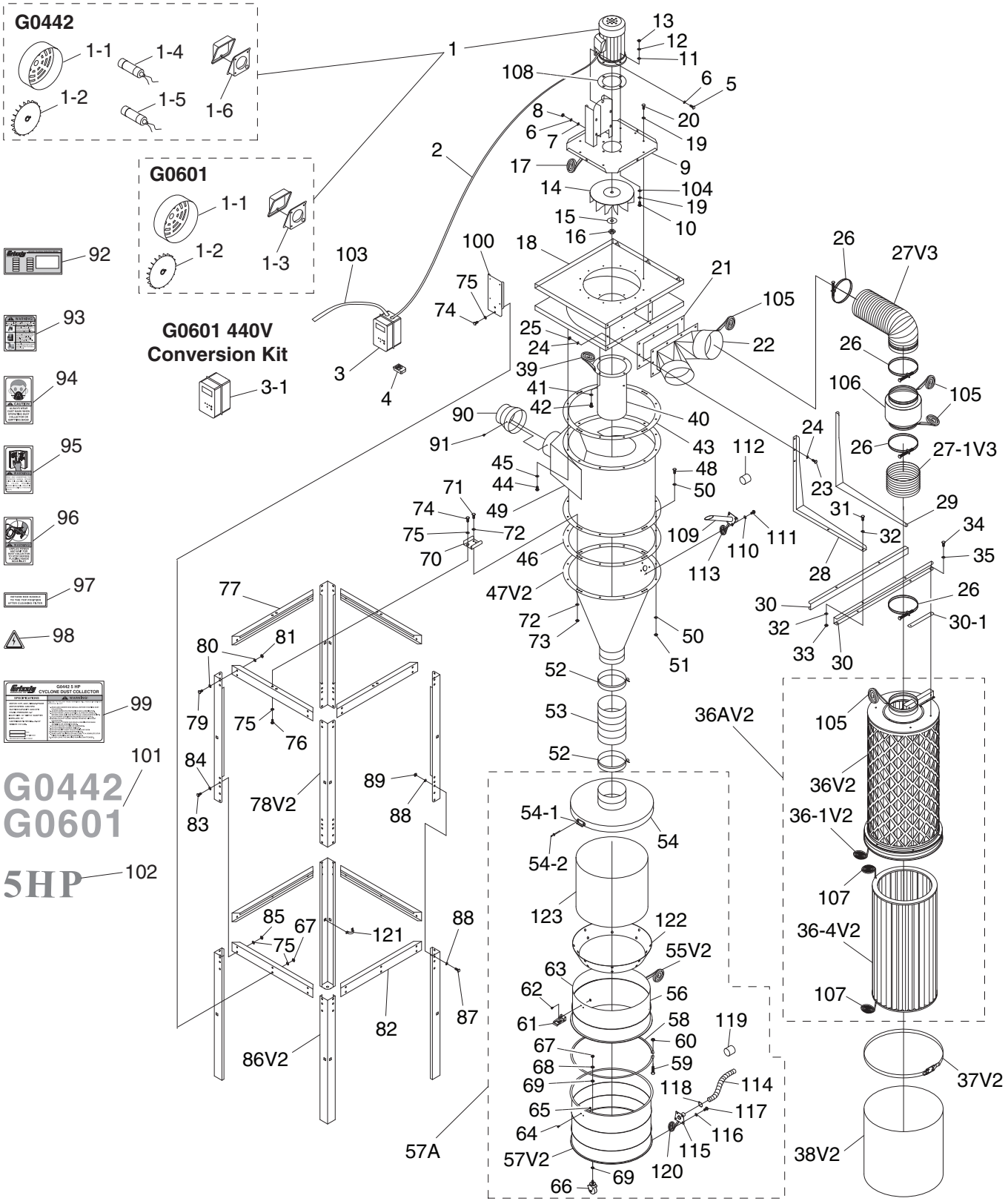


Figure 78. Model G0601 control box wiring.

SECTION 10: PARTS

Main



G0442 Only Parts List

REF	PART #	DESCRIPTION
1	P0442001	MOTOR 5HP 220V 1PH
1-1	P0442001-1	MOTOR FAN COVER
1-2	P0442001-2	MOTOR FAN
1-4	PC400C	S CAPACITOR 400M 250V 1-3/4 X 3-3/4
1-5	P0442001-5	R CAPACITOR 40M 450V
1-6	P0442001-6	JUNCTION BOX
2	P0442002	MOTOR CORD 10G 3W
3	P0442003	CONTROL BOX ASSEMBLY 220V 1PH
5	PB56	HEX BOLT 1/2-13 X 1-3/4

REF	PART #	DESCRIPTION
6	PW01	FLAT WASHER 1/2 IN
7	PLW07	LOCK WASHER 1/2
8	PN06	HEX NUT 1/2-13
9	P0442009	BLOWER COVER
99	P0442099	MACHINE ID LABEL
101	P0442101	MODEL NUMBER LABEL
103	P0442103	POWER CORD 10G 3W 10'
108	P0442108	MOTOR GASKET

G0601 Only Parts List

REF	PART #	DESCRIPTION
1	P0601001	MOTOR 5HP 220/440V 3PH
1-1	P0601001-1	MOTOR FAN COVER
1-2	P0601001-2	MOTOR FAN
1-3	P0601001-3	JUNCTION BOX
2	P0601002	MOTOR CORD 14G 4W
3	P0601003	CONTROL BOX ASSEMBLY 220V 3PH
3-1	P0601003-1	CONTROL BOX ASSEMBLY 440V 3PH
5	PB16	HEX BOLT 3/8-16 X 1-1/2

REF	PART #	DESCRIPTION
6	PW02	FLAT WASHER 3/8
7	PLW04	LOCK WASHER 3/8
8	PN08	HEX NUT 3/8-16
9	P0601009	BLOWER COVER
99	P0601099	MACHINE ID LABEL
101	P0601101	MODEL NUMBER LABEL
103	P0601103	POWER CORD 12G 4W
108	P0601108	MOTOR GASKET

G0442/G0601 Common Parts List

REF	PART #	DESCRIPTION
4	P0443005	REMOTE CONTROLLER
10	PB52	HEX BOLT 1/2-13 X 1
11	PWF04	FENDER WASHER 1/2 IN
12	PLW07	LOCK WASHER 1/2
13	PN06	HEX NUT 1/2-13
14	P0442014	IMPELLER 16"
15	P0442015	IMPELLER WASHER 1/2
16	PN03	HEX NUT 3/4-16
17	P0440017	FOAM TAPE 3 X 6 X 1800MM
18	P0442018	IMPELLER HOUSING
19	PW07	FLAT WASHER 5/16
20	PB07	HEX BOLT 5/16-18 X 3/4
21	P0442021	OUTLET GASKET 456 X 226MM

REF	PART #	DESCRIPTION
22	P0442022	OUTLET PORT
23	PB03	HEX BOLT 5/16-18 X 1
24	PW07	FLAT WASHER 5/16
25	PN02	HEX NUT 5/16-18
26	P0441026	HOSE CLAMP 8"
27V3	P0442027V3	FLEXIBLE HOSE 8" X 23-1/2" V3.11.09
27-1V3	P0442027-1V3	FLEXIBLE HOSE 8" X 4-3/4" V3.11.09
28	P0442028	LEFT FILTER L-BRACE
29	P0442029	RIGHT FILTER L-BRACE
30	P0442030	FILTER CROSS BRACE
30-1	P0442030-1	BRACE GASKET 240 X 32MM
31	PB21	HEX BOLT 3/8-16 X 3/4
32	PW02	FLAT WASHER 3/8

G0442/G0601 Common Parts List

REF	PART #	DESCRIPTION
33	PN08	HEX NUT 3/8-16
34	PB07	HEX BOLT 5/16-18 X 3/4
35	PW07	FLAT WASHER 5/16
36AV2	P0637041AV2	CANISTER ASSEMBLY V2.11.09
36V2	P0637041-4V2	CANISTER OUTER CAGE V2.11.09
36-1V2	P0637041-1V2	GASKET 3 X 25 X 1700MM V2.11.09
36-4V2	P0637041V2	CANISTER FILTER 486 X 995MM V2.11.09
37V2	P0637045V2	FILTER BAG CLAMP 545MM V2.11.09
38V2	P0637046V2	COLLECTION BAG 570 X 600MM V2.11.09
39	P0442017	FOAM TAPE 3 X 6MM X 1800MM
40	P0442040	INTAKE CYLINDER 12"
41	PW07	FLAT WASHER 5/16
42	PB07	HEX BOLT 5/16-18 X 3/4
43	P0442043	BARREL GASKET 686MM DIA.
44	PB07	HEX BOLT 5/16-18 X 3/4
45	PW07	FLAT WASHER 5/16
46	P0442043	BARREL GASKET 686MM DIA.
47V2	P0442047V2	CYCLONE FUNNEL V2.08.10
48	PB03	HEX BOLT 5/16-18 X 1
49	P0442049	INTAKE BARREL
50	PW07	FLAT WASHER 5/16
51	PN02	HEX NUT 5/16-18
52	P0440048	HOSE CLAMP 9"
53	P0442053	CLEAR FLEXIBLE PIPE 9" X 10"
54	P0440050	COLLECTION DRUM LID V2.08.06
54-1	P0637137	DRUM LID HOOK
54-2	P0637138	HOOK RIVET
55V2	P0441051V2	DRUM SEAL TYPE-R 2.1M V2.11.09
56	P0441052	UPPER DRUM 25GAL
57A	P0441053A	COLLECTION DRUM ASSEMBLY
57V2	P0440052V2	COLLECTION DRUM 35GAL V2.08.10
58	P0441054	DRUM CLAMP
59	PB04	HEX BOLT 5/16-18 X 3
60	PN02	HEX NUT 5/16-18
61	P0442061	DRUM LID LATCH
62	PS06	PHLP HD SCR 10-24 X 3/8
63	PN07	HEX NUT 10-24
64	PS06	PHLP HD SCR 10-24 X 3/8
65	PN07	HEX NUT 10-24
66	P0440056	CASTER 2"
67	PN08	HEX NUT 3/8-16
68	PLW04	LOCK WASHER 3/8
69	PW02	FLAT WASHER 3/8
70	P0442070	COLLECTOR MOUNTING BRACKET
71	PB03	HEX BOLT 5/16-18 X 1
72	PW07	FLAT WASHER 5/16
73	PN02	HEX NUT 5/16-18

REF	PART #	DESCRIPTION
74	PB21	HEX BOLT 3/8-16 X 3/4
75	PW02	FLAT WASHER 3/8
76	PN08	HEX NUT 3/8-16
77	PH7499008	UPPER STAND BRACE
78V2	P0442078V2	UPPER STAND LEG V2.08.10
79	PB21	HEX BOLT 3/8-16 X 3/4
80	PW02	FLAT WASHER 3/8
81	PN08	HEX NUT 3/8-16
82	PH7499013	LOWER STAND BRACE
83	PB21	HEX BOLT 3/8-16 X 3/4
84	PW02	FLAT WASHER 3/8
85	PN08	HEX NUT 3/8-16
86V2	P0442086V2	LOWER STAND LEG V2.08.10
87	PB21	HEX BOLT 3/8-16 X 3/4
88	PW02	FLAT WASHER 3/8
89	PN08	HEX NUT 3/8-16
90	P0442090	REDUCER 8"-10"
91	PHTEK5M	TAP SCREW M4 X 12
92	P0442092	MOTOR SPEC LABEL
93	P0442093	MOTOR WARNING LABEL
94	PLABEL-32	DUST MASK 2W X 3.3H
95	PLABEL-12	READ MANUAL 2W X 3.3H
96	PLABEL-59	HANDS/INLET LABEL
97	P0442097	RETURN RED HANDLE LABEL
98	PLABEL-14	ELECTRICITY 1.4W X 1.2H
100	P0442100	STAND SWITCH BRACKET
102	P0442102	HORSEPOWER LABEL
104	PTLW04	EXT TOOTHED WASHER 1/2
105	P0637136	FOAM TAPE 3 X 15 X 700MM
106	P0637039	NOISE MUFFLER 8"
107	P0637041-6V2	GASKET 38 X 35 X 1570 V2.11.09
109	P0440080	CYCLONE VACUUM PORT
110	PW07	FLAT WASHER 5/16
111	PB07	HEX BOLT 5/16-18 X 34
112	P0440083	PORT PLUG 1-1/24"
113	P0440084	FOAM TAPE 3 X 6 X 300MM
114	P0440085	VACUUM HOSE 1-1/4" X 98"
115	P0440086	COLLECTION DRUM VACUUM PORT
116	PW07	FLAT WASHER 5/16
117	PB07	HEX BOLT 5/16-18 X 34
118	P0440089	HOSE CLAMP 1-1/4"
119	P0440083	PORT PLUG 1-1/24"
120	P0440084	FOAM TAPE 3 X 6 X 300MM
121	P0442121	VACUUM HOSE CLIP 2-1/2"
122	P0440092	COLLECTION DRUM VACUUM RING
123	P0441114	DRUM COLLECTION BAG 640 X 1200MM

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We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number,'' which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

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